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Original Articles.

ON THE GENERAL MALAISE OF RUN DOWN WOMEN.

By Horatio R. Bigelow, M.D., Washington, D.C.

It seems to me that nothing so embarrasses the cool diagnosis of the physician so much as the general wasting away of young women without apparent appreciable cause. In the practice of gynecology scores of cases report themselves in which, without any sexual derangements that can be made apparent by the most rigid subjective and objective examinations, there are grave nervous and digestive disorders, not necessarily neurasthenic, but due to a loss of tone, to a lack of recuperative vitality. The treatment in such patients is often made inoperative by financial reasons. Rest cures are expensive, and even the necessary routine that must be gone through with at one's house can not be satisfactorily carried out in detail without an immediate expense, and the future inroad upon a monthly income, occasioned by the loss of time from daily labor. These factors are also irritants in any line of medication, since the mind will take cognizance of them and fret and worry about where the money is to come from. Herein can the physician give but little else than sympathy, good cheer, and a logical assurance that it is better to lose one, two, or three months in the prospective future of wholesome mind and body than to keep on with the drudgery which must end in irreparable ruin in the not distant future. If the woman feels confident that she will profit thereby, she will not hesitate to adopt the measures enjoined.

So far as my individual experience is worthy of attention, these cases do not depend upon primary uterine or ovarian disease. If the woman suffer at all in her sexual apparatus, it is only the sympathetic cry, which goes to form the student chromatic of a system out of tune. She has backache, pain in the legs, pathological menstrual period, and much else that would lead the gynecologist to relegate all the suffering to special causes, and yet, even should there be slight, or perhaps grave local derangement, general improvement does not supervene upon special local treatment. With becoming safety, one may even advance a step and maintain with the elaborate clinical statistics that many gynecological cases do better when local examinations are deferred and the general system built up upon the best principles of hygiene and therapeutics. If in the human body one viscus shall suffer, the whole body will participate

in the new condition, and adapt itself thereunto. As a general rule, in the beginning of disease, if the physician's attention be directed to the seat of the lesion, every other organ will profit by the convalescence, or will suffer in sympathy with it. But when the pathological process has been going on for a long time, the effect upon neighboring and remote organs becomes more permanent, and that which was at first sympathetic becomes now a manifestation of actual disease. In this light it is not sufficient to attack the primary cause first and alone. If in the very rare instances where uterine irritation, from any cause whatsoever, has set up the line of symptoms characteristic of these "run down" women, the nervous and digestive symptoms have become so disordered that local interference will do no good, on the contrary, it may be the actual occasion of harm.

I have written considerably on the subject of oöphoritis, and I have seen a fairly large number of cases. I have treated many, with varying success, but always with hope and patience. Whatever encouragement has come to me has been due solely to the fact that I go slow, very slow; that I hold out no delusive hope to the patient until after months of strict surveilence over every detail of life shall have given her the conviction, more satisfactory than my doubtful prognosis could be, and because, above all, I work on general principles, and not upon special therapeutics alone. I have my own views upon the necessity of oöphorectomy, and unless there should be marked pyo-salpinx, with grevious bodily disturbance, I should never perform it. Even had I the ability—were my knife guided by the dextrity of a Battey or a Tait—I might be seduced, though I would prefer to temper the surgical enthusiasm with the coolness of the equally scientific diagnostician. To deprive a woman of an integral, and in some unexplained way, an *essential* part, of her distinctive function, useless though it may be in her capacity for child bearing, is a matter of the most serious consideration. Not only so, but the harmonious interrelationship of the entire nervous axis is rudely shocked. A woman deprived of her ovaries can never be a wholly perfect woman. Insensibly to herself, perhaps, her nervous system will cry out against the rude invasion. She will always feel that there is something gone from her, which renders her different from others of her sex. I question much if the patience that suffereth long and is kind was a characteristic of surgeons in special domains, if oöphorectomy would be as frequently practiced. Take months, aye, take years, in general conservatism if in the end the patient shall escape the necessity for surgical procedure. Study, delve, and ponder well over the causes which may have given rise to the ovaritis, and then go for *them*, slowly, cautiously, but confidently.

Now whether the case in which I am figuring be due to an oöphorectomy, or due to a generally run down condition, the salient features in my practice are the same. I get out of my patient and out of her friends

the fullest history possible. I study the family peculiarities, its social and domestic relations, the general environment of the patient. So far as I possibly can, I endeavor to win her confidence—to find out what her ambitions are and have been; what have been her joys and sorrows; what grevious disappointments have struck the cold hand of agony upon her heart; what domestic cares, trials and embarrassments may be hers. I go most carefully into objective and subjective analyses and differentiate between such as are physiological and such as are pathological. I write down everything carefully on the slips which I have prepared for my own use, and I think, study the case and initiate the treatment. If the case is one simply of general malaise, without any uterine disturbance, I put her to bed in a cheery room, with a reliable nurse, if such be within the woman's means, and so far as possible keep the house perfectly quiet. No one is allowed to see her. She is allowed no reading, no work, no correspondence. Perfect bodily rest and mental quietude are aimed at. Then get to work upon the alimentary tract. Feed her for two weeks as babies are fed. The stomach is weak. She has flatulent or nervous dyspepsia. She is constipated, her skin is harsh and dry, tongue coated, breath foul, heart's action weak and irregular. Don't give her aperients or cathartics, let the intestines partake of the general improvement, and a normal tonicity and peristalsis must result. Give her small quantities of easily digested food at regular and frequent intervals, and give her *no medicine* at first unless specially indicated. Nothing is better at the commencement than Mellin's food. It has subserved a most valuable purpose in just such cases. It is easily digested. It furnishes heat and sufficient nourishment, and that is all that is wanted at first. I use it considerably in surgical practice, because the most delicate stomach can tolerate it. The general current, with muscular faradization three times a week. Nothing more, nothing less for seven days. Then add a half wine glass of Eisner's malt, morning and evening, the body to be rubbed every morning with a towel which has been soaked in sea salt water and dried. On the tenth day, or end of the second week, increase the malt and diet list by the addition of chicken broth and broiled chicken. Massage three times a week. Toward the close of third week stop Mellin's food and give full diet, with a bottle of malt per diem, and a Turkish bath twice a week, with moderate Swedish movement, and from this on, build the patient up as Nature would do the work, without overloading the stomach with an intolerent mess of useless medicine. Swedish movement, massage and electricity give her the nervine tonic and the muscular exercise required; the bed gives her surcease from aches and pains; the Turkish baths soothe the excited nervous system, make the skin and the kidneys active. Every symptom seems to be met by such wholesome and rational routine.

If there be oöphoritis, insist upon the same rigorous constitutional reg-

ime, keep it up for months. Apply galvanism to the ovary, one electrode within the vagina and one over the ovary. Use medicated tampons for the correction of any malposition, iodoform and glycerine; or iodoform, glycerine and eucalyptus globulus; or Fl. ext. of belladonna and glyco-phenique; or the glyc. of tannic acid. Tilt's sedative application will often relieve the pain:

℞. Aconitiæ gr. ij.
Atropiæ sulph. gr. viij.
Morphiæ sulph. gr. xvj.
Acidi sulph. dil. *m* v.
Sp. vini rect. ʒ ss.
Glycerine ʒ ij.
Aqua ad. ʒ iv.
M. Fiat linimentum.

If there be much nausea from uterine irritation, the following of Tyler Smith's works well:

℞. Liq. bismuthi et ammon. citrat. ʒ ss.
Acidi hydrocyanici dil. *m*xxiv.
Sodæ bicarb. ʒ i.
Tinct. lavand. co. ʒ iij.
Aquæ +ʒ vi.
Cap. cochl. maj. ij. bis die.

The Turkish bath, with a hot compress over the ovary while the patient is sweating, followed by vigorous massage and intra-vaginal injections of hot water for half an hour while the patient is on the slab—if such a course be persisted in honestly, faithfully and without hope of appreciable benefit for some time, it will *surely* achieve a comfortable and comforting measure of relief. Keep on with the electricity, the baths, the massage and the tampons. Regulate the secretions. Give plenty of digestible food. Enforce the rule of going to bed early, and encourage natural sleep. Look to the constitution first; build it up, and my experience has always been that the angry ovary *must* partake of the well being which is characterizing every other part of the body. It may be that I ride a hobby, but the stride is easy, and the animal has carried me safely thro' many a battle. There is no theoretical conviction equal to that of actual bedside demonstration. I know that such a course carried out with determination for months, perhaps years, will do away with the necessity of the surgical operation, unless the case be one of great gravity. Everything that tends to ovarian excitement must be avoided—mental worries, domestic trials, and the excitement of social dissipation. Look to the digestive tract and then to the nervous system. Don't bother the ovary until the patient can eat, sleep and perform her functions naturally. Begin very gradually with the diet. Educate the stomach. Give something that does not require a large fermentative factor in its digestion, but which will supply the proper amount of heat.

I am satisfied with the results in seven or eight cases which have

fallen to me, and constantly congratulate myself that I did not hastily propose an oöphorectomy.

ASPIRATION IN A CASE OF SUPPURATIVE PELVIC PERITONITIS.

By Frank Warner, M.D., Columbus, Ohio.

Mrs. M. æt. 22, White, strong, robust woman. Married eight months. has menstruated regularly before and since marriage. Has never before had any serious illness. Present illness began during menstruation. After the third day of the flow, suddenly the patient noticed an unusually severe pain lancinating in character, in the left iliac region. The patient had been unduly exposed to the changes of weather during this period, having done a washing in the first part of the menstruation and one day later visiting a distant city of this State to partake of a thanksgiving dinner. On that night she was again indiscreet in attending a party. The day following the menstrual flow, which had been progressing normally, increased greatly in quantity, the pain above described appeared, and a general mallaise took possesion of her. Becoming somewhat alarmed, the following day she returned home. The increased menstrual discharge continued unabated.

After the menstruation had continued eight days, I was summoned to attend. The flow of blood on the previous night had been very considerable and on arising was so excessive as to prove alarming to both patient and friends, the blood passing through linen and flowing down her limbs almost in a stream. The pain and tenderness in the side were severe, but still confined to left iliac region.

A physical examination seemed impracticable to obtain on this occasion.

The treatment adopted was complete rest as far as could be enforced, opium to quiet the pain, the nervous agitation and the acute inflammatory condition which I suspected in this region, and ergot. I also used hot water injections after the plan of Dr. Emmet, and applied externally cloths wrung out of hot water. The menstrual flow was of little consequence after this, entirely ceasing the following day. The pain in left iliac region continued as before, at times being sharp, shooting, and lancinating. The opium and hot water were continued.

On the twelfth day the pain was of a somewhat different character, or rather an additional feature was added, viz., throbbing low down in the pelvic regions.

At this visit, a request for a physical examination was granted, with the following results.

Vaginal Touch.

Index finger of right hand used, patient lying on her back with limbs

flexed. Vulva normal. Vagina, nothing of especial importance noticed. Os closed, lips firm and unyielding. No discharge. Cervix appeared normal as to density, size and position. Recto-uterine space showed no hardness, but some tumefaction and a boggy feel if not fluctuation. Utero-vesical space presented no hardness nor abnormal condition.

Pressure on right side results in no pain or discomfort. On the left side, great tenderness is made manifest by her wincing at the slightest pressure of the finger in that direction.

CONJOINED MANIPULATION.

The slightest pressure exerted in fornix vagina on the left side toward the hand placed over the left iliac region occasioned great pain.

The right ovary normal in size; left unable to make firm enough pressure to determine this point. Slight fluctuation in Douglas' cul-de-sac.

Uterus normal in size, perhaps slightly flexed forward.

INSPECTION.

Examined in the lateral position with Sim's speculum, but nothing but a normal condition of the tissues could be observed as regards the vulva, vagina, os, cervix, the lips of uterus, etc.

I did not employ the use of the uterine sound nor rectal palpation.

I have not yet mentioned anything with reference to the temperature, pulse nor respiration. While a record of these was kept, I shall mention but one or two points associated with them.

In the earliest part of the disease, the temperature was depressed about one degree below the normal of 98⅘°. After the term of two days had elapsed, the temperature went above normal and continued from one to two degrees above it for the remainder of the time which the disease lasted.

There was no vesical irritation at anytime.

Slight nausea and vomiting was present when I first saw the case and continued at intervals throughout the progress of the disease though it usually yielded quite readily to the use of bismuth subnitrate in twenty grain doses.

The facies presented throughout a very anxious expression, and the mental disturbance was so marked as to give her at times a melancholic look. At no time did I discover any tympanitis.

CAUSATION.

That this disease did not follow periuterine cellulitis was evidenced by the fact that neither the symptoms, history or physical exploration revealed the presence of this latter disease. There was no evidence of an abortion or premature labor. It was not dependent upon an endometritis, for such had not existed. The patient had not in anyway been injured. There was no tubercular nor cancerous deposit. So, after reviewing the various causes which might produce this malady, we conclude it was brought about by exposure to cold during menstruation.

TREATMENT.

This consisted of rest in the recumbent position, opium in considerable doses (morp. sulph. ½ gr.) frequently repeated until no more pain could be felt, injections of hot water and cloths applied externally; Bismuth in twenty grain doses as required for the vomiting; quiniæ in five up to thirty grain doses.

On December 13th, I aspirated through the vagina in recto-vesical space and brought away ½ pint of laudable pus, washing the cavity out with water at 100° F. The discharge of this pus was much to the patients relief, and rapid improvement in the symptoms presented themselves.

I saw the patient daily until the 19th, since which I have heard from her through her friends frequently and seen her occasionally, and she has been progressing rapidly towards convalescence. On December 25th, menstruation appeared, with a return of some of the previous symptoms. although in nothing like so marked a degree. The hemorrhage continued until January 2d, oftentimes being an excessive flow and accompanied with signs of obstructive dysmenorrhea, as the blood would cease flowing for a time and then be expelled with expulsive like pains.

At the time of temporarily discharging the patient, I expected at an early date to be called upon to relieve the two remaining disorders, dysmenorrhea and menorrhagia, resulting from the displaced uterus, but greatly to my surprise and gratification, neither of these disagreeable symptoms continued after three menstruation epochs, and upon physical examination, I found the uterus had returned almost to its normal position, yet some hardness of the tissues still existed through the left iliac region.

I think it is probable, that the early aspiration of the pus from this region prevented a permanent uterine displacement, for, by removing the pus, the uterus was no longer crowded into an abnormal position where it might have soon been bound by inflammatory adhesion; and, also, the pus no longer present in the pelvic cavity, a source of great irritation, was now absent, which conduced to a more ready subsidence of the high grade of inflammatory action.

"DIVERSITY, OR MODIFIED HEREDITY."

A paper read before the Dearborn County Ind., Medical Society,

By D. H. JAMES, M.D., Aurora, Ind.

The cable that holds the ship safely, amidst the buffetings of the storm, symbolizes the doctrine of evolution. Like it, a few strands twisted forms a coherent whole. Like it, strength forms aggregation. Like it, beauty forms its symmetry, and simplicity. And like it, confidence, forms its truthfulness.

At our last meeting I attempted to untwist one of its strands "the law of heredity" and show the nature of its fibres. To day I shall

attempt to untwist another of its strands, "diversity or modified heredity."

In my last paper the burden of my theme was, like parent, like offspring. In my present paper it will be, like parent, often unlike offspring.

And, from this apparent discord, I think, we shall be able to evolve such harmony, that a Mozart would be delighted to worship at its shrine.

As we proceed in our investigation, we shall find it necessary, to hold more, and more, in abeyance educational bias, in philosophy and theology. Without this we can make no progress towards the desired ultimatum, the discovery or reception of new truths. Nature appears willing to aid us in this inquiry, by distorting the surface of the earth; throwing up different strata, so that we can almost see the beginnings of life upon our planet.

The records printed on this stone book are never untruthful, we may sometimes be mistaken, in a letter, here and there, but the text we are sure, can never be interpolated.

Geologists have tabulated the earth's strata into three grand divisions, tertiary or cainozoic, secondary or mesozoic, and primary or palœozoic. Down deep, in a portion of this lowest of the formations, lay hidden for millions, perhaps, billions of years, until discovered in 1859, a small organic body, now known by the name, "eozoon canadense" given to it in 1864, by Professor Dawson of Montreal. This discovery is both satisfactory, and, unsatisfactory. It goes back a great way, but it does not go back far enough; it shows an organism too far advanced, we want organisms still more simple or elementary, and, this I am afraid we shall never obtain. Nature so kind thus far, has with a kind of malignant laugh, burnt up the older and more desired records.

Charles Darwin says, page 10, in his Origin of Species, Appleton edition, 1873.

"The laws governing inheritance are for the most part unknown. No one can say why the peculiarity in different individuals of the same species, or in different species, is sometimes inherited and sometimes not so; why a child often reverts in certain characters to its grandfather or grandmother or more remote ancestors, why a peculiarity is often transmitted from one sex to both sexes, or to one sex alone, more commonly but not exclusively to the like sex. It is a fact of some importance to us, that peculiarities that appear in the males of our domestic broods are often transmitted either exclusively or in a much greater degree, to the males alone. A much more important rule, which I think may be trusted, is that, at whatever period of life a peculiarity first appears, it tends to reappear in the offspring at a corresponding age, though sometimes earlier. In many cases this could not be otherwise, thus the inherited peculiarities in the horns of cattle could appear only in the offspring when nearly mature; peculiarities in the silk worm are known to appear at the corre-

sponding caterpillar or cocoon stage. But hereditary diseases and some other facts make me believe that the rule has wider extension, and that, when there is no apparent reason why a peculiarity should appear at any particular age, yet as it does tend to appear, in the offspring at the same period at which it first appeared in the parent. I believe this rule to be of the highest importance in explaining the laws of embryology. These remarks are of course confined to the first appearance of the peculiarity, and not to the primary cause which may have acted on the ovules or on the male element; in nearly the same manner as the increased length of the horns in the offspring from a short horned cow by a long horned bull, though appearing alike in life, is clearly due to the male element."

Darwin page 9. "Any variation which is not inherited is unimportant for us. But the number and diversities of inheritable deviations of structure, both those of slight and those of considerable physiological inportance, are endless."

Dr. Prosper Lucus's treatise, in two large volumes, is the fullest and the best on this subject. No breeder doubts how strong is the tendency to inheritance; that like produces like, is his fundamental belief; doubts have been thrown on this only by theoretical writers. When any deviation of structure often appears, and we see it in the father and child, we cannot tell whether it may not be due to the same cause having acted on both; but when amongst individuals, apparently exposed to the same condition, any very rare deviation, due to some extraordinary combination of circumstances, appears in the parent—say once amongst several million individuals—and it reappears in the child, the mere doctrine of chances almost compels us to attribute its reappearance to inheritance. Every one must have heard of cases of albinism, prickly skin, hairy bodies, etc., appearing in several members of the same family. If strange and rare deviations of structure are really inherited, less strange and commoner deviations may be freely admitted to be inheritable. Perhaps the correct way of viewing the whole subject would be, to look at the inheritance of every character whatever as the rule, and non-inheritance as the anomaly. —Darwin, page 5.

When we compare the individuals of the same variety, or sub-variety, of our older cultivated plants and animals, one of the first points which strikes us, is, that they generally differ more from each other than do the individuals of any one species or variety in a state of nature. And if we reflect on the vast diversity of the plants and animals which have been cultivated, and which have varied during all ages under the most different climates and treatment we are inclined to conclude that this great variabililty is due to our domestic productions having been raised under conditions of life not so uniform as, and somewhat different from, those to which the parent-species had been exposed under nature. There is also some probability in the view propounded by Andrew Knight, that

variability may be partly connected with excess of food. It seems clear that organic beings must be exposed during several generations to new conditions to cause any great amount of variation; and that when the organization has once begun to vary, it generally continues varying for many generations. No case is on record of a variable organism ceasing to vary under cultivation. Our oldest cultivated plants, such as wheat, still yield new varieties; our oldest domesticated animals are still capable of rapid improvement or modification. As far as I am able to judge, after long attending to the subject, the conditions of life appear to act in two ways, directly on the whole organization or on certain parts alone, and indirectly by affecting the reproductive system. With respect to the direct action, we must bear in mind that in every case, as Professor Weimann has lately insisted, and as I have incidentally shown in my work on "Variation under domestication," there are two factors, namely: the nature of the organism, and the nature of the conditions. The former to be much more important; for nearly similar variations arise under, as far as we can judge, dissimilar conditions; and on the other hand, dissimilar variations arise under conditions which appear to be nearly uniform. The effects on offspring are either definite or indefinite. They may be considered definite when all or nearly all the offspring of individuals exposed to certain conditions during several generations are modified in the same manner. It is extremely difficult to come to any conclusion in regard to the extent of the changes which have been thus definitely induced. There can, however, be little doubt about many slight changes, such as size from the amount of food, color from the nature of the food, thickness of the skin and hair from climate, etc, Each of the endless variations which we see in the plumage of our fowls must have had some efficient cause; and if the same cause were to act uniformly during a long series of generations on many individuals, all probably would be modified in the same manner. Such facts as the complex and extraordinary outgrowths which invariably follow from the insertion of a minute drop of poison by a gall-producing insect, show us what singular modifications might result in the case of plants from a chemical change in the nature of the sap.

Indefinite variability is a much more common result of changed conditions than definite variability, and has probably played a more important part in the formation of our domestic races. We see indefinite variability in the endless slight peculiarities which distinguish the individuals of the same species, and which cannot be accounted for by inheritance from either parent or from some remote ancestor. Even strongly marked differences occasionally appear in the young of the same litter, and in seedlings from the same seed capsules. At long intervals of time, out of millions of individuals reared in the same country, and fed on nearly the same food, deviations in structure so strongly pronounced as to deserve to be called monstrosities arise; but monstrosities cannot be separated by

any distinct line from slighter variations. All such changes of structure, whether extremely slight or strongly marked, which appear amongst many individuals living together, may be considered as the indefinite effect of conditions of life on each individual organism, in nearly the same manner as a chill affects different men in an indefinite manner, according to their state of body or constitution, causing coughs or colds, rheumatism, or inflammation of various organs.

With respect to what I have called the indirect action of changed conditions, namely: through the reproductive system being affected, we may infer that variability is thus induced, partly from the fact of this system being extremely sensitive to any change in the conditions, and partly from the similarity, as Köireuter and others have remarked, between the variability which follows from the crossing of distinct species, and that which may be observed with plants and animals when reared under new or unnatural conditions. Many facts clearly show how eminently susceptible the reproductive system is to very slight changes in the surrounding conditions. Nothing is more easy than to tame an animal, and few things more difficult than to get it to breed freely under confinement, even when the male and female unite. How many animals there are which will not breed, though kept in an almost free state in their native country? This is generally, but erroneously, attributed to vitiated instincts.

Many cultivated plants display the utmost vigor, and yet rarely or never seed; In some few cases it has been discovered that every trifling change, such as a little more or less water at some particular period of growth, will determine whether or not a plant will produce seeds. I cannot here give the details which I haye collected and elsewhere published on this curious subject, but to show how singular the laws are which determine the reproduction of animals under confinement. I may mention that carnivorous animals, even from the tropics, breed in this country pretty freely under confinement, with the exception of the plantigrades or bear family, which seldom produce young, whereas carnivorous birds, with the rarest exceptions, hardly ever lay futile eggs. Many exotic plants have pollen utterly worthless, in the same condition as the most sterile hybrid, when on the one hand, we see domesticated animals and plants, though often weak and sickly, breeding freely under confinement; and when, on the other hand, we see individuals, though taken young from a state of nature perfectly tamed, long lived and healthy (of which I could give numerous instances), yet having their reproductive system so seriously affected by unperceived causes as to fail to act, we need not be surprised at this system when it does act under confinement acting irregularly, and producing offspring somewhat unlike their parents. I may add, that as some organisms breed freely under the most unnatural conditions (for instance, rabbits and ferrets kept in hutches), showing that their reproductive organs are not easily affected; so will some animals and plants with-

stand domestication or cultivation, and vary very slightly, perhaps hardly more than in a state of nature.

Some naturalists have maintained that all variations are connected with the act of sexual reproduction, but this certainly is an error, for I have given in another work a long list of "sporting plants" as they are called by gardeners; that is, of plants which have suddenly produced a single bud with a new and sometimes widely different character from that of the other bud on the same plant. These bud variations, as they may be named, can be propagated by grafts, offsets, etc., and sometimes by seed. They occur rarely under nature, but are far from rare under culture. As a single one out of many thousands, produced year after year on the same tree under uniform conditions, has been known suddenly to assume a new character; and as buds on distinct trees, growing under different conditions, have sometimes yielded nearly the same variety, for instance, buds on peach trees producing nectorines, and buds on common roses producing moss-roses, we clearly see that the nature of the organism in determining each particular form of variation; perhaps of not more importance than the nature of the spark, by which a mass of combustible matter is ignited, has in dertermining the nature of flames.

Changed habits produce an inherited effect, as in the period of the flowering of plants when transported from one climate to another. With animals the increased use or disuse of parts has had a more marked influence, thus I find in the domestic duck that the bones of the wing weigh less and the bones of the leg more in proportion to the whole skeleton than do those of the wild duck, and the change may be safely attributed to the domestic duck flying much less and walking more than its wild ancestors. The great and inherited development of the udder in cows and goats in countries where they are habitually milked, in comparison with these organs in other countries, is probably another instance of the effect of use. Not one of our domestic animals can be named which has not in some country drooping ears, and the view which has been suggested that the drooping is due to the disuse of the muscles of the ear, from the animals being seldom much alarmed, seems probable.

Many laws regulate variation, some few of which can be dimly seen, and will hereafter be briefly discussed. I will here only allude to what may be called co-related variation. Important changes in the larvæ or embryo will probably entail changes in the mature animal. In monstrosities the corelations between quite distinct parts are very curious, and many instances are given in Isidore Geoffroy Helvarie's great work on this subject. Breeders believe that long limbs are almost always accompanied by an elongated head. Some instances of corelation are quite whimsical, thus, cats which are entirely white and have blue eyes are generally deaf, but it has been lately stated by Mr. Tait that this is confined to the males. Color and constitutional peculiarities go together, of

which many remarkable cases could be given among animals and plants. From facts collected by Hensinger it appears that white sheep and pigs are injured by certain plants while dark colored individuals escape. Professor Wyman has recently communicated to me a good illustration of this fact. On asking some farmers in Virginia how it was that all their pigs were black, they informed him that the pigs ate the paint-root (lachnanthes), which colored their bones pink and caused the hoofs of all but the black variety to drop off; and one of the "crackers" (Virgina squatters) added: "We select the black members of a litter for raising, as they alone have a good chance of living."

Hairless dogs have imperfect teeth; long haired or coarse haired animals, are apt to have, it is asserted, long or many horns; pigeons with feathered feet have skin between their outer toes: pigeons with short beaks have small feet, those with long beaks large feet. Hence if a man goes on selecting and thus augmenting any peculiarity, he will almost certainly modify unintentionally other parts of the structure, owing to the mysterious laws of corelation. The results of the various unknown or dimly understood laws of variation are infinitely complex and diversified.

It is worth while to study treatises on some of our cultivated plants, as the hyacynthe, potato, even the dahlia, etc., and it is surprising to note the endless points of structure and constitution in which the varieties differ from each other. The whole organization seems to have become plastic, and departs in a slight degree from the parental stem. The subject of diversity in organic growths is so extensive that I must now pause with this meagre outline. And as Telemachus had Minerva for his mentor, teacher and spokesman, so I have Darwin for mine. I now add a list of some of the other strands that go to complete the cable.

Struggle for existence.
Survival of the fittest.
Selection natural.
" Sexual.
" Artificial.
" Unconscious.

The above include in its effects all organisms to man. The following, affecting man, and through his power the world's fauna and flora, are

The study of science.
" art.
" morals.

The exercise of his mental and physical powers in due proportion, keeping the golden mean.

The effects of fashion in dress, language and deportment.

The cultivation of a friendly disposition to all.

There are others which may be considered subjective, or depending on the idiosyncrasy of the individual, and need not and cannot be enumerated here.

And now it may be asked, to what extent iconoclasm is involved in this doctrine. Some may say "all our idols are in danger of being destroyed," some may say that very few are in danger, and some may say none are likely to be injured. This, I think, may be left to individual opinion. But I believe a more liberal theology may be built upon a more advanced teleology and more advanced views of the working of the Deity in nature.

The great pioneers who founded the doctrine of evolution, Lamarck, Buffon, Geoffroy St. Hilaire, the author of "Vestiges of Creation," etc., and the modern upholders and expounders of the theory, Spencer, Huxley, Tyndall, Haeckel, Asa Gray, Schmidt, etc., I could not notice beyond listing them for want of space and time. I fear I have already made this paper too long, and I now leave it for your criticism and discussion, for it is only by these means truth can be established and error eliminated.

Society Reports.

ST. LOUIS OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Stated Meeting, April 17, 1884.

Puerperal Sepsis.

Dr. W. Hutson Ford, in a paper on the above subject, arrives at the following conclusions:

1. The normal and extraordinary mechanical disturbances of the genital organs and adjacent structures characteristic of pregnancy and labor, constitute the pathological basis of the puerperal phlegmasiæ, which may therefore be primary and in no way dependent upon septic impressions of any kind.

2. Defective uterine contraction after labor must be acknowledged as a cause of metritis, phlebitis, lymphangitis, embolism and pyemia, wholly independent of any septic influences in a number of cases certainly not very large. This defective contraction, on the other hand, is one of the strongest predisposing conditions of the diseases named in presence of lochial septicity or under the influence of septicemia.

3. Septicity of the lochial discharge is the prime cause of puerperal septicemia, and in the very great majority of cases of all the forms of local and general post-partum disease.

4. Puerperal septicemia must be regarded as sporadic and purely autogenetic in many cases. In others it is due to the activity of septic or contagious matter derived *ab externo*.

5. In the present state of our knowledge it is quite unnecessary to invoke the existence of an essential puerperal fever. What has been so styled is much more probably either an intensified septicemia or the ma-

lignant expansion of a febrile process primarily of the irritative grade, and independent of contagion and sepsis.

Prophylactic Indications.—As deductions from the foregoing principles, the main indications for the prevention of post-partum inflammation, septicity of the lochia and its absorption into the economy are as follows:

1. During pregnancy the avoidance of all artificial interference by pressure with the abdominal circulation, compression of the uterus, extraordinary exertion, jars, blows and sudden motion, the stooping posture or prolonged standing, the regulation of the functions of the bowels and bladder, and avoidance of vivid emotions and especially of depressing psychical influences.

2. Avoidance during labor of all mechanical or therapeutical interference not absolutely requisite.

3. Induction of prompt and permanent contraction of the uterus after delivery, and quietude of the bowels and pelvic organs.

4. To maintain the freedom of the uterine cavity from organic debris and patulousness of the utero-vaginal canal.

5. To prevent septicity of the lochial discharge.

6. To repair immediately after labor such traumatic injuries as are susceptible of operation, and to prevent the contact of the lochia with lacerations or newly repaired wounds, or its stagnation around them.

I. The pregnant woman should lay aside her corset after the fifth month, and suspend all her clothing from the shoulders. She should recline much, and avoid dancing, fashionable dissipation and late hours. As pregnancy advances all pursuits which require a forward inclination of the body, such as drawing, painting, the use of the sewing machine or of the needle in the sitting posture should be interdicted. All extraordinary motion, horseback riding, long journeys over common roads or even on the street cars, should be forbidden. The pregnant woman should live in apartments upon one floor, so as not to be obliged to climb stairways.

II. During labor the use of the hand or of instruments in the vagina and uterus should be resorted to only when imperatively indicated, and the greatest care observed to avoid tension, contusion and laceration. Violent voluntary efforts of expulsion in aid of the pains should be discountenanced, and no prolonged frictions or long continued pressure upon the uterus or in the vagina should be practiced except in the presence of hemorrhage, and not merely as incentives to a speedy delivery. The administration of ergot before the delivery of the placenta is to be especially condemned, even where there is no obvious obstacle to the prompt extrusion of the after-birth.

III. After labor a quarter of a dram of the fluid extract of ergot or three grains of the solid extract should be administered four times a day for several days at least; perhaps still longer, for a week or more, as

Thomas recommends. The child should be applied to the breast on the first day, and every few hours afterward, to aid in obtaining and securing complete uterine contraction and early involution. A moderately tight binder should be applied after delivery so as to exert gentle pressure upon the relaxed peritoneal vessels. All unnecessary examinations or other manipulations involving contact with the genital passages, and particularly with the neck and interior of the uterus, as long as the lochia are not fetid and no cervical or perineal laceration of notable extent exists, are to be condemned. The bowels should be moved after the third or fourth day by an enema and not by a purge.

IV. The placenta should be withdrawn from the vulva with a twisting motion sufficiently pronounced to twist the attached membranes, and so aid in their extraction. It should be immediately examined, and if any parts are deficient the finger should be introduced into the uterus and the missing portions extracted. Advantage should be taken of this opportunity to extract any membranous fragments that may be felt, and the finger should always be passed into the vagina and neck for this purpose immediately after the extrusion of the after-birth, even when this is entire. The condition of the cervix should be accurately determined by the touch as to laceration at the same time, and the perineum similarly scrutinized. As soon as the shock of labor has passed away the genital organs should be well illuminated and carefully examined. The woman should be placed on the side, though not with the arm thrown behind her, and examined with a three-bladed dilating speculum. If slight lacerations of the perineum, vagina, urethra or cervix be observed they should be thoroughly dried and painted with Richardson's styptic colloid, which is not apt to induce inflammation and prevent primary union, like the strong carbolic acid and persulphate of iron mixture that Dr. Thomas advises, and which I would fear to use. Of course, if the perineal rupture be extensive, it should be operated upon immediately, and the lines of union painted with styptic colloid. If the cervix is lacerated the torn edges should be approximated by a few wire sutures passed at the deepest points of fissure, and the internal and external lines of union painted with the styptic colloid; partial direct union may thus occur. Care must be taken not to constrict the cervical opening too much, as this will favor the subsequent retention of coagula and the lochial discharge. The cervical canal and vagina should now be washed out with a two per cent. solution of carbolic acid, and the woman replaced in bed with an antiseptic napkin applied to the vulva. Should clots form in the uterine cavity, and remain unexpelled under the administration of the ergot, they must be extracted. The uterus and vagina must be subsequently washed out with a carbolic acid or boracic acid solution.

V. I cannot think it necessary in private practice to adopt the stringent measures of disinfection lately recommended by Dr. Thomas, such as the

removal of curtains and upholstered furniture, the washing of the floor and ceiling with antiseptic solutions, and the sponging of the bed and mattress with the same solution. Such precautions are certainly advisable in hospital practice and during epidemics of puerperal septicemia, but may be dispensed with when the patient is isolated and the hygienic surroundings good. I am convinced, however, that the mattress and the bed-clothing ought to be new and, according to the French plan, especially prepared for the occasion. No coverings should be used which, as is often the case, may even at a remote former period have come in contact with scarlatinous, diphtheritic or other patients affected with malignant or contagious febrile disorders. The most stringent care should be exercised that no one approach the lying-in woman who has been near a patient affected with pyogenous or septicemic disease of any kind, or the subject of laparotomy, or any grave surgical affection or operation which requires handling or dressing, or who has witnessed or conducted any post mortem examination or dissection, or who has handled any morbid specimens, either fresh or preserved in alcohol, during the previous week, without special self-disinfection.

Every such person should wash the body and hair with soap and water and make a complete change of clothing. I do not believe the use of an antiseptic solution indispensable in all cases, although I so far agree with Dr. Thomas in this respect that I should advise the use of a solution of Labarraque for sponging the skin and washing the hair after the bath, before conducting a case of labor, for all who have lately been in attendance upon puerperal septicemia, scarlatina or erysipelas. According to Dr. Oxley, of London, conveyance of scarlatinal infection by the physician himself to ordinary patients is so excessively rare as to be practically unheard of, but persons in ordinary health are infinitely less prone to accept this or any other contagious matter than the lying-in woman. After post-mortems, dissections, or dressing gangrenous wounds, no case of labor should be undertaken for at least three days. The scent will cling to the hands for that period, sometimes after the most energetic ablution, and it cannot surely be safe to bring such a hand into contact with the genital organs of the parturient woman, even if washed and disinfected. *Under no condition is any one justified* in approaching a parturient woman while attending upon a case of *puerperal fever, septicemia, or erysipelas.*

The nurse and accoucheur should carefully wash their hands, cleanse the dirt from under their finger nails, and soak their hands in bichloride of mercury solution, as Thomas recommends, or in a chloride of soda (℥iv.—O j. of water) solution before approaching the bedside. The hands should be disinfected anew, by soaking before every subsequent contact with the genital organs of the woman. All instruments used should be washed and soaked in the disinfectant solution. If a catheter

is used it should be new, and be carefully cleansed with soap and water and soaked in a solution. If a silver catheter, previously used, be employed, it must be first boiled, and washed, and soaked, and used for no other patient. The oil used to grease it should contain five per cent. of carbolic acid.

All these are merely the usual precautions observed for operations upon the uterus, cervix and vagina.

The woman should rest in bed upon a folded sheet previously dipped in a boiling saturated solution of boracic acid, and then wrung out, dried and warmed. As soon as labor is declared, the genital organs should be covered with a dry napkin similarly impregnated with boracic acid. These napkins are to be prepared in sufficient quantity in anticipation of the accouchement. After delivery these napkins should be used to receive the lochial discharges. They may be temporarily replaced by Garrigues' pad, or by wads of borated absorbent cotton, or folds of borated lint. The labia should be washed twice a day with warm milk and water, and afterward asperged with a boracic acid solution. The vagina should also be washed out after each act of urination, whether the catheter be used or not, with a boro-glyceride or boracic acid solution previously warmed, but not more frequently than this. The syringe I employ for this purpose is the same I use for lithotomy, a Gross's regurgitant nozzle, which I show here. It is provided with a large acorn-shaped extremity which will not wound even a lacerated cervix. It should be passed to the depths of the vagina, and as it throws intermittent and regurgitant streams it cannot introduce fluids directly into the uterus. If the cervix is lacerated or perineorrhaphy or any important obstetrical operation has been performed, the syringings of the vagina should be done *every four hours and after every act of urination.* This has been my practice for several years, and I have never observed any other than the best results from it. After each washing a fresh napkin should be applied to the vulva.

The use of iodoform suppositories for the vagina and uterus, as a substitute for the antiseptic injections suggested and experimented upon by Spæth, of Vienna, is *ad huc sub judice.* The introduction of such suppositories would evidently require quite as much if not more disturbance of the parts than the use of the syringe. Although they might be applicable to the vagina, the *retention* of a tube or catheter in the uterus for purposes of washing would, in my opinion, be decidedly less harmful than the repeated passage of a suppository into the uterine cavity, most especially when the lochia is fetid and endometritis exists.

In this case we must regard ourselves as face to face with the enemy. The uterus must now be washed out as well as the vagina, twice as often.

It may be advisable to limit the washings to the vagina for the first

twelve hours, as sometimes the fetidity is purely vaginal, so that this may be enough. After such a period, if the putrid odor persists, the uterine cavity itself must be washed out.

The best way to do this is by means of a long bulbous tipped syringe nozzle furnished with a circlet of fine orifices so as to throw ten or a dozen regurgitant streams passed to the fundus of the uterus without quite touching it. The stem of the syringe nozzle, which I here show, is "S" shaped, so that it lifts up the anterior lip of the cervix, and thus secures an easy reflux for the fluid injected. This nozzle should be tied in so that the parts may not be disturbed by repeated introduction of the instrument, which is not only more difficult than it would seem to be, but is wholly out of the question on account of the great disturbance of the parts it would necessitate.

The bag-syringe is the only one which should be used for these intra-uterine washings, as it can be easily managed so as never to throw air into the uterine cavity, which will happen sometimes with all forms of bulb syringes. A bed-pan capable of draining itself is now placed under the patient and the washing may be most effectively done, as often as we please, without in any way stretching or irritating the inflamed parts or even moving the patient from her position. I have found it quite easy to instruct any competent nurse how to administer such a uterine washing without introducing air or annoying the patient in the least. The first washing should be with a solution of permanganate of potassa, of the strength of a dram to a pint. After this I prefer the solution of Labarraque, of the strength of half an ounce to the quart of water, at 103° or 104°. The uterine washings should be practiced every two hours until the septicity of the discharge is corrected. When the lochial discharge is fetid, mere vaginal washing will seldom suffice, even when its fetidity has been due to conditions proximal to the uterine cavity. I have seen such washings constantly fail as might be anticipated, unless the uterus itself be disinfected, for the septicity once induced rapidly penetrates to the interior of the uterus and unless corrected there, will continually reinfect the entire genital tract. I have moreover never seen any ill effects from the retention of the nozzle for several days in the uterine cavity, and it must be tied in, a point forcibly insisted on by Dr. Barret in March, 1881, before this Society.

A No. 8 or 10, English gum catheter may be substituted for the silver tube, but is apt to be displaced, softens, and fails to carry the injection to the fundus, nor does it distribute the injected fluid so uniformly as the silver nozzle, and permits it to be pumped in too rapidly. The fountain syringe I regard as just as dangerous here as it is for washing the male bladder, on account of the hydrostatic pressure of the fluid it delivers, its unremitting flow, the temptation offered to allow its flow to manage itself automatically, and the consequent danger of distension of the uterus.

The injections should be made with a bag-syringe, not forcibly but very slowly compressed, so that the fluid may flow out of the genital passages as fast as it is injected, and over-repletion of the uterus be avoided. Double current syringe nozzles and catheters like Nott's are a "snare and a delusion." We must bear in mind that we design by these injections merely to remove noxious fluids, and to disinfect the genital tract. We cannot aim at detaching adherent masses of lymph or organic fragments by imparting strength or volume to the detersive stream. This is not only useless, but apt to cause most serious consequences.

If organic debris are known to exist in the uterus, or their presence is suspected, direct measures must be taken to remove them which will be adverted to further on.

The injection should be made with great slowness, and the introduction of air may be perfectly avoided by proper care in first expelling it from the syringe. The pipe itself always contains the lochial fluid and is therefore free from air, or may be made so by suction with the syringe.

Therapeutical Indications.—When the septic matter has penetrated into the system, as shown by the occurrence of a rigor, high temperature and rapid pulse with prostration, the causes of these phenomena must first be sought in the conditions of the uterine cavity and vagina.

The uterus must be thoroughly washed out with a permanganate solution of the strength already indicated or a two per cent. solution of carbolic acid. The washings must be continued until the fluid returned is devoid of odor, and if fragments of placental tissue still remain attached they must be removed with forceps or the blunt spoon, the speculum being used to retract the perineum and facilitate these operations. After this the interior of the uterus should be swabbed out, if there is any bleeding, with perchloride of iron, or painted over with tincture of iodine as practiced in a case reported by Dr. Maughs in his vigorous and instructive paper on "Puerperal Fever," read before this Society, in September, 1879.

The uterine washings must be afterwards conducted as before but administered still more frequently, every two hours or even every hour until the temperature falls. The antiseptic solutions may be increased in strength if deemed necessary, and weakened again when the lochial fetor declines.

Our main therapeutical resources in these cases of sporadic septicemia, are the salicylates, quinine and iron, and if the pulse be bounding and full, but never otherwise, veratrum viride. Drugs, however, are in my opinion, quite secondary in importance to the intra-uterine and vaginal washings. Cold applied to the abdomen, either by a rubber coil or cold compresses, is a popular and most effective method of reducing temperature. The vast peritoneal surface is directly cooled, so that the blood which reached the liver is notably lowered in temperature. This neces-

sarily induces an abatement in the activity of the heat-forming processes properly occurring in the liver, whose aggregate result constitutes a very large proportion of the entire calorifacient action of the system. By the application therefore of cold to the abdomen, heat is not only abstracted, but its undue generation in the liver is prevented, so that cold applied to the abdomen is very greatly more effective than general spongings or any other refrigerant measures of the sort. In cases of the hyperpyrexia of scarlet fever I have seen iced compresses to the abdomen reduce the temperature from 105° to 100½° in one hour and a quarter, when the salicylates, quinine and veratrum viride had utterly failed to effect it. Still, in septicemia, we should use cold with great care in this way, and watch its results. Iced applications should certainly be avoided, and very moderate cooling such as is effected by the rubber coil would be all that we should venture upon. Barker's late observations upon the use of cold to the abdomen are greatly to be taken to heart as the result of most sagacious and extended observation.

The intra-uterine washings should be made more rarely as the fetor of the fluids diminishes, and the tube may be kept in three days or more. Generally, under the influence of the injections the temperature falls to 100° or less, within twenty-four or thirty-six hours after their institution, and the patient gets well in a few days. Quinine and the salicylates, especially the former in heavy doses, are very effective in preventing a new rise of temperature, provided additional infection be prevented. After the tube is removed from the uterus, vaginal injections with the same antiseptic fluid should be practiced. The borated napkins should from first to last be kept in contact with the vulva, and urination and defecation should be always followed by a vaginal washing.

If these measures fail, it will be in consequence of the extraordinary intensity of the contagium, as in the hetero-genetic cases, or during epidemics, or where parenchymatous inflammation has been excited. In such cases, no amount of antiseptic washing will prevent the occurrence of metro-phlebitis and pyemia, or of consecutive inflammation of the peritoneum and other serous membranes. These phenomena are beyond the control of the syringe, when once established. But as the lochia in metritis, phlebitis, and pyemia is always more or less contaminated, and as its absorption cannot fail to add to the general toxemia, and so diminish or entirely cut off the chances of recovery by aggravating every existing morbid process and inciting the establishment of new ones, the intrauterine and vaginal washings must be sedulously practiced in all the puerperal phlegmasiæ accompanied by lochial fetor. Restlessness can be abated by the bromide of potassium, camphor, and chloral. Alcohol should be used freely after the primary excitability of the system has passed, if exhaustion be imminent. In such cases very large quantities of it may be taken and only with the best results. Opium and its prepar-

ations should be used sparingly if the adynamia is marked, but in larger or even heroic doses where the peritoneum is involved. Indeed, where the peritoneal inflammation is a prominent feature it becomes our best and often only resource, and we should not fear to use it in any doses sufficient to overcome pain and tranquillize the patient.

Stated Meeting, June 17, 1884.

PELVIC INFLAMMATIONS.

Dr. G. A. Moses.—I desire to report some cases illustrating certain forms of pelvic inflammation. One of these exemplified a disease described by Duncan as remote parametritis, remote in time after the producing cause, and also as to the locality affected. This case, also peculiar in other respects, is that of a lady confined with her third child a year ago. I was not her attendant at that time, but had been in previous labors. She was in good health when I returned to the city and found her with a child two weeks old. She suffered more than at any former labor, but the labor was normal. She went to the East after getting up, and came back feeling badly, with symptoms of uterine disturbance. I found a deep laceration on the right side of the cervix extending not only to the junction of the vagina, but into the vaginal tissues, the deep portions of the laceration being, as is common, deflected from a straight line. The other side of the cervix had a slight laceration. The cervix was hypertrophied, and its vaginal surface very tender. There was some uterine subinvolution, and the health was depressed. After a few month's treatment her health somewhat improved, but she was subject to extreme nervousness and depression. Though the erosion was quite relieved, and the condition of the cervix ameliorated, her general nutrition was imperfect. The case was dicharged about the 1st of May, the operation having been done on the 12th of April, 1883. Shortly before I left for the East she felt in excellent health.

The day before I left the city she sent for me, complaining of pain in the right side, which, however, was overcome in a few hours. I returned about the 28th of May, and learned that she had got wet by the rain. Three days afterward she felt pain along the inside of the right thigh. The pain was periodic and sometimes very severe. It was most severe a week after its onset. It followed the course of the anterior crural nerve into the pelvis.

While I was absent she had some fever. The uterus was perfectly movable, not sensitive; no portion of the vagina was sensitive. Upon bimanual manipulation no indication of any inflammatory process about the region of the uterus could be discovered, but on the right side, about the border of the sacrum, and reaching from that line across the ilium I could trace a narrow line of intense pain which seemed to follow the course of the crural nerve, and some hardness. Immediately above Poupart's lig-

ament on the same side there seemed to be an enlarged and sensitive gland, and some little distance down there was tenderness. The pain occurred about eight o'clock every night, with a preliminary darting sensation of heat along the course of the nerve. These attacks of pain recurred at intervals of two to four minutes, increasing in intensity until the patient would cry out in agony. The pain was aggravated by pressure or forcible extension of the thigh. At first it was promptly relieved by the subcutaneous use of morphia, so that the patient would get a night's rest, no rise of temperature following, and next morning she would feel as well as ever. The only tenderness now was in the pelvis along the course of the nerve from half an inch to an inch or more over the region of the uterus. There was still pain on pressure above Poupart's ligament. This increased steadily, requiring the subcutaneous use of morphia at night, which had to be given regularly at first at eight o'clock, then at half past seven, and finally at seven. Among other kinds of treatment, I gave quinine 20 to 30 grains a day, and afterwards applied a blister. Thorough narcosis had no effect upon the pain. From the moment the blister took effect the pain above Poupart's ligament stopped, but returned again in the course of a few days as violent as ever, but not in the neighborhood of the thigh, and instead of being limited to the evening began in the morning and evening, nearly always at the same hour. I believe in this case there was inflammation of the connective tissue around Poupart's ligament. Tenderness still remains, but the general health is somewhat improved, and her appetite is good. The pain does not now come on quite so frequently, but I see very little change otherwise. The case is of particular interest to me from the fact that I consider it one of pelvic inflammation resulting from exposure to cold, perhaps of a part already sensitive, and believe it to be of the same character of inflammation as the ordinary cellulitis or parametritis.

Another case also happened during my absence, that of a lady who was delivered in a normal labor of a good sized child. I had attended her two years ago soon after her marriage, at which time she had severe parametritis for a month or six weeks but finally recovered. I knew nothing more of her until she sent for me and told me she was going to be confined. She was in good health, and her labor was natural in every way. A few days after confinement she had a chill followed by a temperature of 104°. The lochia I believe were normal in every respect; there was slight tenderness over the abdomen. The high temperature subsided to the normal degree in a few days. Excepting some dysuria she had no pains remaining, but at the time I saw her she was having the same kind of periodic pains as the first case, not following the course of the same nerve, but seemingly beginning high up on the right side of the loin in the region of the kidney, and following the course of the right ureter. The pain was periodic, as in the first case. Involution had been imperfect, but

there was very little uterine discharge. I introduced a probe and wiped it out.

Dr. Ford.—How long was this after labor?

Dr. G. A. Moses.—About four weeks. The uterine cavity seemed to be very little sensitive; the uterus was perfectly movable, but sensitive. There seemed to be no special indications for interference in the interior of the organ. The pain gradually subsided up to yesterday, when it appeared to increase, the inflammatory process apparently extending downwards. There seems to be a diffuse peritonitis cemmencing from above and descending into the pelvis. The uterus was examined yesterday, and found to be partially flexed, the cervix rather hard, seemingly somewhat infiltrated. This is another case of periuterine inflammation beginning at a remote point. Such cases have been reported appearing at even a longer time after parturition than in this case, and developing into abscess which took the course of the ordinary psoas abscess six or seven months after delivery. Parturition seems to have given rise to some inflammatory process of insidious character, not attracting the attention of the parturient or of the attendant.

These cases are particularly interesting, as they relate to a peculiar form of inflammatory process which is often overlooked. Our attention is attracted by the periodic pain, neuralgic in character, though no inflammatory process can be observed until careful examination reveals perhaps a small nodular point of hardness due to adenitis or lymphangitis developed subsequent to parturition or to operation about the neck of the cervix especially. These inflammatory points, small in extent perhaps and overlying the track of some important nerve, induce these peculiar pains. One peculiar point is the periodicity of the pain, which in one case occurred almost exclusively in the evening without apparent local inflammatory action.

Dr. S. G. Moses.—I merely wish to remark that I attended the first lady during my son's absence. There was tenderness immediately over the place which is tender now near Poupart's ligament. The pain was periodical, and she was taking quinine at the time. I used counter-irritation, the tincture of iodine and poultices, which relieved her for a few days. When she got well enough I told her to go to the country, and she did so, but in three or four days she returned, saying that the trouble was worse than before.

Dr. Gregory.—What was the interval between the occurrence of the cause and this complication?

Dr. S. G. Moses.—About a month.

Dr. Gregory. — Was that about the length of time in both of these patients?

Dr. G. A. Moses.—In the parturient case it was earlier, a little over three weeks.

Dr. S. G. Moses.—I saw the case referred to in consultation with the gentleman who attended her. She had a very decided fever on the third day, the fever being so high that he called me to see her. The temperature was then 104°.

Dr. McPheeters.—How long after operation for lacerated cervix did the symptoms set in?

Dr. G. A. Moses.—A month, by which time the wound had entirely healed.

Dr. Gregory.—This is a very interesting subject, and these intervals seem to indicate some other cause than the one to which we are wont to assign it. There seems to have been some intercurrent agency, as when a fall is followed after a long period by a local trouble. I make it a rule to ask how long since the trouble began. If it be about a month, the fall must be the cause.

Dr. McPheeters. — We have all known convulsions and other nervous diseases to follow injuries to children, which at the time were regarded as trivial.

Dr. Gregory. — Between most injuries and ultimate sequelæ there is some connection. What imparts interest to these cases is this probable connection.

Dr. Briggs.—In the first case did the doctor regard the enlarged gland as the cause of pain?

Dr. S. G. Moses.—Not at all. A month after the operation he went away and I took charge of the case. The woman was apparently quite well when she was taken with this intermittent pain coming on in the evening, not very severe at first. I consider this was a subacute inflammation going on gradually which has finally evidenced itself. I had already discharged her as a patient, feeling that she was entirely well, when she was taken with these symptoms. At first she attributed them to sitting too much in one position.

Dr. Engelmann.—Are the pains still intermittent?

Dr. S. G. Moses.—Yes, sir.

Dr. Engelmann.—Have they been relieved?

Dr. S. G. Moses.—She is still under treatment and is suffering yet. She never suffered nausea.

Dr. McPheeters.—In cases of dislocated ovaries there is always pain on pressure.

Dr. Boisliniere—It is common in dislocated ovary to observe intense pain on pressure. The displacement of the womb from subinvolution or other causes may involve the ovaries, because they are the satellites of the uterus.

Dr. Briggs. — In this attitude may not the womb be somewhat displaced, dragging down the ovary, making severe tension on it without actual displacement?

Death without Reaction after Ovariotomy.

Dr. Gregory.—This day, Thursday, two weeks ago, I removed an ovarian tumor by laparotomy, but the patient never reacted, and died on Sunday morning about two o'clock. On the evening of the day of operation the pulse was feeble, about 100, the temperature natural, and there was every reason to believe the patient would react favorably, but about daylight next morning she became almost pulseless, her breathing was not satisfactory, and she was cool. This continued until she died, sinking gradually after the operation.

It was a very simple case—the simplest ovariotomy I ever performed. There was but one cyst tapped and then the mass came out and exposed a small pedicle which a single ligature was sufficient to encompass. This was removed, the pedicle dropped loosely in the pelvis, and the wound closed. The abdominal incision was not more than three inches long; the hands were not passed into the abdominal cavity at all, only two fingers, and there was no site from which there could be any hemorrhage except the pedicle. There were no adhesions, and a relative of the patient, a physician who stood by, was so astonished at the short time consumed, the little manipulation, and the small size of the wound that he he could scarcely retain his enthusiasm, seeming to feel that the woman must recover.

The abdomen was not opened after death. We did our best to get an autopsy, but could not. The only suspicion we had was that hemorrhage took place from the pedicle. The abdomen was perfectly flat above the pubes, and upon bimanual manipulation we could almost certainly have discovered if there had been hemorrhage, but nothing indicated that hemorrhage had occurred.

Dr. McPheeters.—How long was she under the influence of the anæsthetic?

Dr. Gregory.—Thirty minutes.

Dr. Boisliniere.—Did you use carbolic acid?

Dr. Gregory.—None.

Dr. Briggs.—Did you use any other antiseptic?

Dr. Gregory.—We used a two per cent solution to put the instruments in.

Dr. Boisliniere.—Did you not wash the cavity out with a solution of carbolic acid?

Dr. Gregory.—No. We sponged the abdominal cavity. A sponge was introduced to discover if there was any blood, but there was none found.

Dr. McPheeters.—Did she completely recover from the effects of the anæsthetic?

Dr. Gregory.—She seemed to do so, and on Thursday evening we supposed she would react and be all right next morning, but she passed into

a condition of syncope, and died Sunday morning shortly after two o'clock.

DOUBLE OVARIOTOMY.

I operated again last Monday upon a double ovarian tumor, removing both ovaries, inflicting, I would say, three times as much injury as in the other case, and the patient has had no alarming symptoms whatever up to this evening. Here we have a striking contrast, a double ovariotomy occupying an hour and a half, the patient being under an anæsthetic the whole time, and in which we removed seven cysts; and the other which resulted fatally after a short operation, without adhesions, and where a small opening was made.

Dr. Engelmann.—Were there any evidences at all of oozing or of hemorrhage?

Dr. Gregory.—There was no sign of bleeding in the abdominal cavity when we sponged it out. The vagina seemed normal, whereas if there had been hemorrhage into the abdominal cavity, there would have been some pressure, some fixation and tension of the vagina. We could get no autopsy.

Dr. Briggs. — Was there anything peculiar or abnormal about the condition of the patient, disease of the kidneys or liver, or some unusual nervousness?

Dr. Gregory.—Nothing of the sort that we could detect. The patient was rather slender and weak. When I was consulted in regard to the case by the attending physician, who was a relative of the patient, I said to him that my rule in all cases was to advise the patient not to be operated on until unfit for usefulness. He objected that she might become pregnant. This was reasonable enough, because she had observed this tumor for some months, and given birth to a premature fetus fifteen weeks before.

The woman wished to be operated on because she could not brook the idea of carrying such a tumor. It was a burden to her, and she tripped into the room to be operated on with a smiling face, and bade adieu to her husband with cheerfulness. She took her position on the table as if glad of the opportunity.

I remember a case which I reported here three years ago, where a girl was anxious to be operated on and I advised her to wait. She remained in school two years before I operated, and she recovered. Here were two years saved. I do not think the operation more dangerous when performed late than when performed early, and two years is something to gain. This is the second easy ovariotomy I have performed. The first died in thirty-two hours.

Dr. Engelmann.—The report of these cases is very interesting, but we must not regard isolated cases. Hundreds of cases demonstrate that early ovariotomies are not so fatal. When ovariotomy was in its infancy abroad,

cases came late to the surgeon, as they do in this part of the United States, and they had as bad results as we. Now it is interesting to note that in Germany and England the number of ovariotomists, and the success that has been attained. The idea has become prevalent that ovariotomy is an easy operation, and every one who has an ovarian tumor is willing to have it removed as soon as it can be recognized, and consequently the successes in the operation have become numerous. In Germany this transformation is now going on, and Dr. Martin, who is a young man, is just living through that period. He told me last year that he was now beginning to have easy operations; they were beginning to come to him early and his success is a great deal better. Of course, his skill is greater, but he nas made it a point to advise early operations. We do not hear in this city so much about waiting until there is a sort of tolerance of the tumor, about the parts getting accustomed to the pressure of the tumor. The results have heretofore not been very encouraging, because the patients are operated on when they could not otherwise live longer.

Dr. Gregory.—I can say nothing in the way of an explanation, but the three easy cases I have had died, and died very quickly.

Dr. Maughs.—Shortly after the formation of this society, this question about early operations was under discussion. Dr. Hodgen stated among other things that he was not hunting up cases upon which to perform ovariotomy. The general sentiment expressed at that time was against the operation if it could be avoided. I presented some results which seemed to indicate that the operation should not be performed until the constitution was affected; that the operation should not be performed unless it was absolutely necessary. This view was adopted by the Society, and Dr. Hodgen assented to it after making a few exceptions. There is nothing peculiar in Dr. Gregory's case except that the patient bled to death. If he had made an autopsy, I think he would have found that the patient died from hemorrhage.

I remember performing ovariotomy in a case in which there was cancer of both ovaries and the uterus. The patient had a large effusion into the abdomen, was not able to walk, was in fact in the last extremity. I told her that an operation did not promise much; but that at least we could draw off the ascitic fluid. In doing so I accidentally wounded the projecting tumor of one of the ovaries. Both ovaries were enlarged, but as I had wounded this ovary I was compélled to remove it. I opened the abdomen and removed a large encephaloid mass, and of course the other ovary had to be removed on account of its cancerous condition. In this case, on account of the brittleness of the tissues, one of the ligatures gave way and the patient was about to bleed to death. The ligature cut through to some extent, and I had some difficulty to secure the pedicle against bleeding on account of the readiness with which the cancerous mass broke down, but applied a thicker ligature, and passed it lower down on the

stump, thus preventing the bleeding. The uterus was enormously enlarged and covered by a vascular network of cancerous material, and in handling the parts some of the vessels gave way, and bleeding was arrested with much difficulty. The ovaries were found to be solid cancerous masses, the largest being about the size of a child's head. The vascular network just mentioned was very friable and broke down readily, and the oozing of blood went on. I found it was not possible to suppress this entirely except by extirpating the uterus; and at one time I did throw the ecraseur around the uterus to remove it, but the patient had lost a great amount of blood that she was not in condition to stand such an operation, so I resorted to the red hot iron to stop the bleeding. Three or four hours after the operation reaction came on and hemorrhage occurred. These symptoms were about the same as those which Dr. Gregory enumerated. Half a gallon of blood may flow into a pelvic cavity from which a large ovarian tumor has been removed, and yet present no external evidences of its presence.

In this case I told the doctors present that I was afraid there was oozing, but there was no chance of saving the woman from cancerous surfaces that did not admit of ligation. As it was, we used stimulants and she lived until the next day.

A year ago a lady came to me from Springfield to have an ovarian tumor removed. I told her the tumor could be removed, but that everyone who underwent the operation didn't get well. At this information she became demoralized, and begged to be permitted to go home. I saw that if she were placed upon the operating table she would die of fright. So I told her husband to take her home, but that some day she would want to be operated on when it was too late. About five weeks ago her condition became so alarming that I was sent for to operate. I diagnosed a semi-solid and adherent tumor of the left ovary. The abdomen was opened with some difficulty. We found the tumor adherent to the abdominal wall, and I was compelled to use a block-tin sound, and finally my finger to break up the adhesions. The incision extended to the ensiform cartilage. The tumor was removed, the pedicle secured and dropped into the cavity. No hemorrhage took place, the patient recovered without bad symptoms, and is now entirely well.—*St. Louis Courier of Medicine.*

AT a meeting of the Union District Medical Society (counties in Ohio and Indiana), held at Oxford, Ohio, October 25, 1883, the Society adopted and ordered published the following: "Resolved, That after carefully inspecting the facilities of the Oxford Retreat, and from a knowledge of the eminent abilities of its Superintendent, we hereby endorse it as an institution in every way adapted to the care and treatment of the cases for which it was designed and commend it to professional support."

OBSTETRICAL SOCIETY OF BOSTON.

Meeting of February 9, 1884.

The President, Dr. C. Ellery Stedman, in the Chair.

Dr. C. M. Green reported a case of

Acute Hydramnios, with Remarks on the Pathology of this Affection.

On March 9, 1883, Dr. J. R. Chadwick was consulted by an American woman, twenty-nine years of age, whose history was briefly as follows: She had married at the age of nineteen and, in her ten years of married life, had borne five children in rapid succession, namely in 1875, 1876, 1878, 1879, and 1881. The children were all girls and weighed at birth from eight to ten and one-fourth pounds: the labors were all natural. The mother suckled her last baby once a day for four months, when the catamenia appeared and recurred regularly until October 27, 1882, at which date her last period ended. A month later she began to have nausea and vomiting, which symptoms continued with considerable severity until early in March, 1883, since which time she had rarely vomited but once a day. About the middle of February she thought she felt fetal movements and she had several fainting spells. Believing herself at this time about four months pregnant she thought she was larger than she ought to be: two weeks later, that is about March 1st, the abdomen began to grow rapidly larger in size, and thinking something must be wrong with her the woman sought advice. She was below the medium height and of slender form. The abdomen was symmetrically enlarged to the usual size at the end of the eighth calendar month of pregnancy: the parietes were tense, and the superficial veins well marked. There was tympanitic resonance in the loins and over the epigastrium, elsewhere the abdominal percussion note was flat. Palpation revealed a well-marked fluctuation wave in all directions, stopping short however of the tympanitic region, and showing, as Dr. Chadwick subsequently pointed out to the writer, that the intestines were not floating in the fluid; in other words, that it was not a case of ascites. On vaginal examination the introitus was seen to be of deep violet hue; the cervix was soft, long, and funnel-shaped. No fetal parts were felt by vagina; but by abdominal palpation Dr. Chadwick felt fetal parts so remote from each other as to warrant in his mind a surmise of twin pregnancy. No fetal heart sounds were heard; but the uterine souffle was plainly audible.

On March 12th the case was seen by Drs. W. L. Richardson and C. M. Green in consultation with Dr. Chadwick, The tumor had increased in size, and the patient was suffering from distention and pain in the right side and back. The twenty-four hours' urine amounted to only fifteen ounces, its color was high, specific gravity 1,030, and there was a trace of albumen. Ballottement revealed the presence of a small fetus. The

consultants agreed with Dr. Chadwick in the diagnosis of acute hydramnios, and the patient was placed by him under the care of the writer.

On March 13th the circumference of the abdomen, measured on a level with the umbilicus, was 36.5 inches. Inunction of the abdominal wall with oil and the application of a swathe were advised; and tinct. digitalis and tinct. ferri chloridi were ordered for both their tonic and diuretic effects. Sedatives were also employed. Six days later the abdominal circumference, measured as before, was 39.0 inches, an increase of 2.5 inches; and the distance from the ensiform cartilage to the pubes was 16.5 inches.

On March 21st the patient was found in great distress: she could assume no position in which she was comfortable, she had had no refreshing sleep for several days, narcotics seeming only to deaden her sensibilities. She could take no solid food, felt worn out, and expressed herself as feeling as if she would burst. The twenty-four hours' urine during the past eight days had varied from ten to twenty ounces, the daily average being less than a pint. I determined to induce labor, and at 10.30 p.m. of the same day, with the kind assistance of Drs. Chadwick and J. W. Farlow, I proceeded with the operation. At this time the abdominal girth had not increased above 39.0 inches; but the distance from the ensiform cartilage to the pubes had increased from 16.5 to 18.0 inches; the pulse was 96; the temperature, 98.3° F. The cervix was soft and patulous, the os internum admitting two fingers. A new, English gum-elastic catheter, with its stylet sharply bent about an inch from the tip, I passed between the uterus and membranes a distance of six or seven inches and then, turning the catheter quickly, ruptured the membranes high up. Withdrawing the stylet I thus drew off through the catheter six quarts of liquor amnii, and the uterus contracted down to about two inches above the umbilicus. There was no shock, but a feeling of great relief: the pulse fell to 88. There were active fetal movements. I then withdrew the catheter, pinned a binder firmly around the body from the breasts to the fundus uteri, and waited. In three-quarters of an hour uterine contractions set in and continued feebly during the night; the patient was comfortable, however, and slept between the pains: there was a constant, slight dribbling of the amniotic fluid. During the following day there was a cessation of pains, and the patient was comfortable, taking a proper amount of nourishment and sleep; there was, however, retention of urine which necessitated the use of the catheter.

At 2 o'clock a.m., March 23d, pains began again with somewhat increased vigor, and at 6:15 a.m. the os was dilated and expulsive pains began. A fetus presenting the head, O.R.P., quickly descended into the pelvis, the occiput rotated forward, and the child was born still in fifty minutes from the beginning of the stage. A second fetus now

appeared at the brim presenting O.R.A.; but in the temporary cessation of pains the head disappeared, and a shoulder entered the pelvis. I did not rectify the malposition, but waited to see what would happen. Strong pains very soon began, and in thirty minutes from the birth of the first fetus the second was born by spontaneous evolution, *corpore conduplicato*. The single placenta was expressed ten minutes after and was followed by a very moderate hemorrhage, which however was promptly controlled by ergot. The patient suffered no discomfort during the puerperium except from the breasts, which were hard and tender during three days, but which subsided without treatment. On the second day the temperature reached 101.2° F., but declined the following day and was not above normal after the fourth day. Carbolized vaginal douches were used for the sake of cleanliness, and small doses of ergot and opium were employed to promote involution of the uterus. On the tenth day I measured the abdomen and found the circumference at the level of the umbilicus to be 27.5 inches, and the distance from the ensiform cartilage to pubes 12 inches; there had been an increase, therefore, from the dropsical distension, of 11.5 inches in the girth and of 6 inches in the distance from the xiphoid cartilage to the pubes, in a woman much below the medium size.

The chief dangers to be apprehended in cases of this nature are

1. Shock, from the sudden discharge of a large amount of fluid and consequent disturbance of the circulation;

2. Hemorrhage from the inefficient post partum contraction of a uterus whose muscular tonicity has been much impaired by undue distention.

To avert the danger of shock the membranes were ruptured high up in the manner described; and as, fortunately, the fluid did not escape around the catheter but only through it, I was able with my finger on the end of the catheter to control the escape of the fluid while the pulse was carefully watched. To avoid the danger of hemorrhage I purposely withdrew only a portion of the superfluous fluid and left the remainder to trickle away slowly; this gave time for the patient to have needed food and rest, and for the uterus to regain in a measure its muscular tone before it should be called upon to expel its contents. The uterus was also carefully supported post partum, and with the use of ergot firm contraction was maintained.

In accordance with the rule in twins from one ovum the fetuses were of the same sex; namely, both were boys (1); they weighed one pound and one pound two ounces respectively. One fetus was club-footed, the other bore no outward mark of abnormality. The placenta was single and

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1 It is an interesting fact, worthy of notice here, that in the great majority of cases of hydramnios the fetuses are female. In McClintock's thirty-three cases there were only eight boys, and of Spiegelberg's cases the fetuses were females almost without exception.

weighed one pound one ounce; microscopically it was of normal appearance. There was one chorion, and there had doubtless been originally two amnions; but the septum had partly atrophied, and as usual in such cases the remaining septum was of falciform shape. A specimen of the amniotic fluid was submitted to Dr. Charles Harrington for chemical analysis; he reported, however, that it contained nothing abnormal. The placenta, membranes and fetuses were sent to the pathological laboratory of the Harvard Medical School for examination: most unfortunately the fetuses were lost, and with them the possible opportunity of throwing light on the pathology of this obscure subject. Dr. W. F. Whitney very kindly examined microscopically the placenta and membranes; but there were no pathological appearances.

The pathology of hydramnios has long engaged the attention of obstetricians and has been the subject of much critical and polemic writing. Prof. Charpentier, in a long and exhaustive treatise, (1) concludes that the pathological anatomy of this affection is far from presenting the least certainty; for, he says, it is not rare to find the lesions to which the hydramnios has been thought to be due in cases where there had been no trace of hydramnios. But before attempting to seek the cause of the increased quantity of amniotic fluid constituting the condition known as hydramnios, let us consider for a moment the probable origin of the fluid existing under normal circumstances. This subject is still a matter of controversy; but the opinions of those commanding the greatest weight of authority warrant the present belief that the fluid is a fetal product and that its sources are

1. The capillaries of the skin.

2. The capillary network described by Jungbluth and known as the vasa propria of the chorionic boundary-membrane of the placenta, lying just beneath the amnion, and anastomosing with the umbilical vessels.

3. The kidneys.

In accordance with this belief, the sources of an abnormal increase of the liquor amnii are to be sought in the fetus and in the placental circulation; in an excessive kidney- and skin-secretion of the fetus; and in abnormal transudation from the vasa propria of the chorionic boundary-membrane above mentioned, which may remain patent beyond the time when their gradual obliteration normally begins, namely, after the first half of pregnancy. In short the cause is to be sought in mechanical disturbances of the fetal circulation, especially of the circulation of the umbilical vessels with which the vasa propria anastomose. (2)

A maternal influence in the production of the superfluous amniotic fluid is not, perhaps, to be completely excluded. Spiegelberg pointed

1 Archives de Tocologie, Juin—Octobre, 1880.
2 Spiegelberg, Lehrbuch der Geburtshülfe, 2te Aufl., S. 316.

out that from the numerous vessels of the decidua vera, after the union of this membrane with the decidua reflexa, a transudation might well take place into the amniotic cavity. Carl Braun does not accept this view, but believes that such transudations collect either between the uterus and the chorion and give rise to the so-called hydrorrhœa gravidarum, or, very rarely, between the amnion and the chorion simulating but not constituting a true hydramnios.(1) Braun therefore attributes the origin of the superfluous fluid solely to the mechanical disturbances of circulation above alluded to.(2)

Some recent observations of Otto Küstner, of Jena, form an interesting and suggestive contribution to the literature of this subject, even if they do not afford any positive knowledge. In 1876 Küstner published (3) an account of the autopsy in a case of twins associated with a high degree of amniotic dropsy, and deduced from the post mortem appearances the probable origin of the superfluous fluid. The smaller fetus bore only the signs of death from suffocation; the larger, however, revealed

a. Hypertrophy of the heart, of both ventricles equally;

b. Cirrhosis of the liver, which was also smaller than normal;

c. Ascites to 150 ccm. (℥v circa).

The examination was incomplete from the fact that the placenta and membranes were not seen by Küstner; in fact it was not known whether or not the diseased fetus had lain in the hydramniotic sac; but from such facts as he had Küstner explained the occurrence of hydramnios as follows:

The cirrhosis of the liver, which was probably the primary factor, resulted in compression of the branches of the hepatic veins and of the portal vein. As the umbilical vein opens by one of its branches into the portal vein (the other branch constituting the ductus venosus), the portal vein may be said to have two separate places of ramification; namely, an intra-fetal, in the abdomen of the fetus, and an extra-fetal, in the placenta. Compression of the portal vein in the liver would cause increased blood tension in both the intra-fetal and extra-fetal distribution of this vein. This increased tension could be compensated for by an increased heart action; if the tension increase slowly, the heart hypertrophies gradually and accommodates itself to the increased demand upon it. But when finally the hypertrophy no longer suffices to compensate for the increased venous tension, transudations naturally result. These transudations take place from the intra-fetal distribution as ascites; from the extra-fetal, as hydramnios.

In 1880 Küstner had a case of acute hydramnios which presented striking analogies to the case above mentioned, and he has published the

1 Carl Braun, Lehrbuch der gesam. Gynaek., S. 79.
2 Op. cit., S. 604.
3 Archiv für Gynakologie, Band x., S. 134.

case in full with a synopsis of several cases observed by others. In this second case premature labor with twins took place in the sixth month. The fetuses were both female and lay in separate amniotic sacs: the first sac, in which lay the larger fetus, contained by estimate thirty pounds of fluid; the second, which did not rupture until after the birth of the first fetus, contained but little fluid. The second fetus presented no abnormality; the first and larger fetus, which lay in the dropsical amnion, showed the following post-mortem appearances:

Great enlargement of the liver (apparent by abdominal palpation), its vessels uniformly enlarged, the peri-vascular spaces enlarged and partly filled with blood corpuscles, the connective tissue around the vessels not increased. Ascites to the amount of 30 to 40 ccm. Effusion in both pleural cavities. Hypertrophy of both ventricles of the heart. A number of circumscribed enlargements of both umbilical arteries, the umbilical vein presenting no changes. The single placenta weighed 410 grams (14.5 ounces), and its cotyledons were soft and œdematous. The cord belonging in the dropsical amnion had a central insertion and was œdematous; the other cord had a velamental insertion and was slender; both placenta and membranes were fattily degenerated to a great degree. The fluid from the dropsical membrane, in addition to the usual constituents, contained 0.07 per cent. of urea, which is more than double that which Fehling considers the normal amount.

Comparison of Küstner's two cases reveals certain striking similarities. In both cases the fetuses were of like sex, but of different degrees of development; in both, the smaller fetus was healthy, while the larger showed marked pathological changes affecting chiefly the liver and heart. In both cases the heart was hypertrophic, in the earlier case corresponding in size to that of a child four months old. In both cases there was ascites. The changes in the liver, however, were different; in the earlier case there was well-marked cirrhosis, and the liver was small, pale, and anæmic; in the later case the liver was enlarged and presented the appearances above stated. Küstner considered, however, that both livers were examples of the same process—interstitial hepatitis—the former case being in the last stage, and the latter case in the first. From the high per cent. of urea in the liquor amnii of the second case Küstner concludes that an abnormally large amount of urine was voided by the fetus, owing to the increased action of the hypertrophied heart.

In addition to his own cases Küstner has collected four others of well-marked dropsy of one amnion in twins from one ovum; that is, where the placenta is single, with one chorion and two amnions. In all these cases the heart was hypertrophied and in one case dilated. In three of the cases the liver was small and cirrhotic; in two, in what Küstner considered the hypertrophic stage of interstitial hepatitis; in the remaining case the condition of the liver was not noted.

These cases, while too few in number to prove anything, yet serve to illustrate in what way disturbances of the fetal circulation, whether originating in the heart or in the liver, may lead to a dropsy of the amnion. The one condition necessary, it seems to me, to a serous transudation is a venous stasis; whether the prime disturbance is in the heart, in the liver or elsewhere, it matters not, provided the blood tension becomes so great as to cause capillary transudations. It seems to me not irrational to suppose that excessive convolution of a long fetal cord might so retard the blood stream with undue friction as to lead to circulatory disturbances. Again, an active congestion of the fetal kidneys, with coincidently increased arterial tension produced by a hypertrophied heart, would lead to an increased urinary secretion which, evacuated into the amnion, would increase unduly the amount of the liquor amnii; such seems to have been a factor in Küstner's second case.

In cases of twins from one ovum the placental vascular distribution is such that a considerable number of cotyledons are common to the circulation of both fetuses, and it is possible that one fetus may thereby gradually appropriate an undue portion of his fellow's blood; this would explain why in one-ovum twins one is usually larger than the other. It may be, too, that consequent upon the increased proportion of blood circulatory disturbances may ensue in the larger fetus, to compensate for which the heart may hypertrophy and thus lead the way to serous transudation. Certain it is that hydramnios occurs frequently in connection with twin pregnancy; but while in some cases of record the larger fetus has been found to occupy the hydramniotic sac, the cases are too few to warrant the assertion that it is always so.

It will be seen, therefore, that the pathology of this affection is still involved in uncertainty; but recent observations have done much to illuminate the subject, and in due time doubtless the causes of hydramnios will be as clearly demonstrated as those of other pathological conditions at one time equally obscure.

DISCUSSION.

Dr. J. R. Chadwick said that the most characteristic feature of this case was the extreme rapidity with which the abdomen enlarged, resembling nothing in his experience except ascites. The patient, though believing herself to be nearly four months pregnant in the middle of February, had observed no increase in girth; between that time and March 9th she had grown to the size of the end of the eighth month of pregnancy. The resemblance to ascites was enhanced by the very distinct wave of fluctuation which was felt throughout the greater part of the abdomen, and by the impossibility of defining by palpation the upper end of the uterus. Ascites was, however, excluded by his finding that the wave of fluctuation was not transmitted to and from the epigastric region, where the resonance was tympanitic, to the other parts of the abdomen, where it was flat.

This point in the differential diagnosis between ascites and all encysted abdominal fluids (uterine, ovarian, vesical, etc.), is mentioned by Spencer Wells in the following terms: "When fluid is free in the peritoneal cavity the wave of fluctuation may be felt not only where the sound is dull on percussion, but also beyond the line of dullness, even where resonance may be tympanitic. The intestines float in the fluid, and the fluid may be thrown in waves among them. But when fluid is contained within a cyst, fluctuation cannot be detected beyond the boundaries of the cyst. Hence the outline of the cyst, traceable by dullness on percussion, and the line where fluctuation can be perceived, must be the same."

Dr. Chadwick emphasized this diagnostic sign because it seemed to him to have been generally overlooked by even the most thorough and eminent writers, such as Thomas, Hart and Barbour, Goodell, Tait, and others. He had found it to be more reliable than any other sign.

An ovarian cyst complicating pregnancy was excluded by the sudden rapidity of growth, by the absence of a furrow in the abdomen indicating the line of demarcation of the cyst and the pregnant uterus, by the ubiquitous wave of fluctuation, and by the central position of the cervix uteri in the pelvis.

As to the source of the amniotic fluid, he could add nothing to its solution except to point out, in favor of its being contributed in part, at least, by the fœtal kidneys, that in those cases in which certain drugs administered to the mother have been detected in the amniotic fluid, they have likewise invariably been found in the first urine passed by the child.

Dr. Richardson believed there would be less danger of entering the placental sinuses if the catheter, previously warmed, were passed without the stylet, and the latter subsequently introduced.

Dr. Chadwick said if the tip of the catheter, with the bent stylet contained, was kept away from the membranes, there would be no danger in his opinion, unless air was actually pumped in.

Dr. Draper said that if the catheter entered a utero-placental sinus the negative pressure of the uterus would serve to draw in air.

Dr. Chadwick said that to illustrate more fully this unusual complication of pregnancy he would give briefly the notes of a case supplied him by Dr. Helen Morton, with whom he had seen patient in consultation:—

Mrs. W., aged twenty-eight years, eight years married, had always been hysterical, and at times depressed mentally, but was otherwise in perfect health, as was her husband.

January 14, 1877, was born the first child. July 14, 1878, was born the second child at six and a half months of pregnancy; there was an excess of amniotic fluid; the child was weak, and had only superficial respiration; the umbilical cord continued to pulsate, and kept bleeding, although repeatedly ligated, until the death of the child, twelve hours after birth.

November 7, 1879, was born the third child, at the seventh month of pregnancy, with an excess of amniotic fluid; the cord pulsated and bled as before until death after four hours.

February 14, 1881, was born the fourth child, at the eighth month of pregnancy, there being marked hydramnios. The child was puny, jaundiced, had feeble respiration and pulsating cord for some time, but survived, and was nursed nine months.

In February, 1883, was born the fifth child, at the eighth month; the liquor amnii was so markedly increased that at the fourth month of pregnancy the uterus was as large as it usually is at six and a half months: the fœtal heart sounds were strong during the pregnancy. The cord beat for half an hour, when it was tied; the child died four hours later.

The patient conceived again on March 14, 1883, and Dr. Chadwick was called in consultation on June 9th, in the expectation that some means might be devised to prevent the recurrence of the hydramnios and premature delivery. He was unable to offer any suggestion, but subsequently advised the persistent use of chlorate of potash, which was done for a time, but he could not flatter himself that it had much if any effect. Early in the autumn she was seen by Dr. Fordyce Barker, who advised the use of viburnum prunifolium. There was no hydramnios in this pregnancy. At the seventh month nature made an effort for many days to expel the contents of the womb; but the uterine contractions were successfully arrested by the repeated administration by Dr. Morton of morphine. This, the sixth, child was born at full term, December 14, 1883. The child was small; the cord did not pulsate after ligation; the amount of amniotic fluid was normal. The patient was kept in bed from the middle of the pregnancy until delivery.

The above history shows a remarkable recurrence of hydramnios in successive pregnancies, even under the most favorable conditions of life and health.

Dr. Bixby alluded to the case of an anæmic woman whose abdomen was as large as at full term, but who did not think herself pregnant; he aspirated, and drew off four ounces of amniotic fluid. Miscarriage ensued ten hours later.

The general consensus of the Society seemed to be that aspiration of the amniotic sac through the os, as suggested by Playfair, was sure to excite uterine contractions and terminate the pregnancy; and that the only available treatment was to induce labor when the distention became extreme. Anæmia should, of course, be appropriately treated when present, and various palliative measures could be resorted to.

Dr. E. J. Forster reported

A CASE OF PLACENTA PRÆVIA, MOTHER AND CHILD LIVING.

Dr. Chadwick had always used subcutaneous injections of ether in cases of collapse, and had found them equally efficient even if the patient were

etherized. Dr. Sinclair and Dr. Richardson had also used ether for this purpose.

Dr. Richardson said he was frequently astonished at the way physicians temporize and delay when brought face to face with a case of placenta prævia; they will often resort to the vaginal tampon or colpeurynter when the patient has been bleeding for hours, and is bleached and fainting.

Dr. Sinclair said that delay is criminal in such cases; that prompt dilatation and delivery would often save the child as well as the mother.

Dr. J. R. Chadwick exhibited

A SPECIMEN OF DERMOID CYST OF THE OVARY.

The patient had had an obscure mental and nervous affection following childbirth which had kept her in bed for three years, during which there had been frequent retention of urine, necessitating the passage of the catheter. On many such occasions a tumor had been felt, at times resting upon the bladder, at others in one or the other lumbar region; it was repeatedly pushed up almost to the ribs, where it was for the moment suspected to be a floating kidney; for long periods it could not be found at all. He was utterly at a loss to account for it, so that he attended the autopsy at the McLean Asylum, where she died of the brain lesion a month ago, with great curiosity. This dermoid cyst of the left ovary, as large as the fist, was found with a pedicle nearly four inches long, which allowed the tumor to be put in almost any part of the abdomino-pelvic cavity. It contained this wad of hair imbedded in a mass of solidified sebaceous matter, and four small incisor teeth attached to the same alveolar process which is still connected with the wall of the cyst.

BRITISH MEDICAL ASSOCIATION.

Uterine Hemorrhage and a New Method of Treatment.

Read in the section of Obstetric Medicine by the late Richard Richardson, F.R.C.P., Rhayader.

I shall not take up your time in considering the physiology and pathology of uterine hemorrhage, but shall devote attention more particularly to the treatment which has been most successful in my hands during a period of twenty years. I was anxious to find a reliable remedy which could be easily applied without any apparatus; this I have found in iron alum, when applied in crystals the size of a hazel nut, or even larger in severe cases. It is to be introduced with the finger up to the os uteri, but not into it, and there allowed to remain. The uterus will at once contract, a firm coagulum is formed, and the hemorrhage ceases.

Iron alum is also antiseptic, as I have removed clots on the fourth or fifth day after its application which were quite free from any disagreeable odor.

In a case of very severe hemorrhage, two or three days afterward I in-

ject a little warm water, to which may be added, if you like, a little Condy's fluid, and remove the clots. It is perfectly free from danger, and I have never known it to fail.

Case 1. My first application of iron alum was in the case of a woman aged 43, troubled with metrorrhagia for about nine days, and reccurring every two or three days. She was the mother of six children, the youngest of whom was four years old. The catamenia had appeared very regularly since she weaned her last. She was sure she had not aborted, as she was "poorly" a fortnight antecedent to the hemorrhage, which was the proper time for menstruation. On examination I discovered a granular ulceration of the cervix. I treated her with digitalis, quinine, gallic acid, and sufficient dilute sulphuric acid to dissolve the ingredients. She was ordered to remain in the recumbent posture with cold cloths applied to the vulva. In three days the hemorrhage again came on. Two days subsequently to this I determined to try iron alum, and so introduced a small crystal the size of a pea; the bleeding ceased at once. On the following day I examined the patient, finding two or three clots in the vagina which were perfectly dry, and which crumbled between the fingers on rubbing them; I injected warm water and examined the os, which was now nearly free from granulations. Another piece of iron alum was applied, and there was no recurrence of the discharge. On the forth day the granular ulceration was thoroughly healed and the patient was cured. For some time she was very anæmic and required iron tonics, but she soon recovered her strength, and has been well up to this time.

Case 2. This case was an abortion happening to Mrs. W., who had given birth to two children previously to this, the youngest being two years of age. She was now advanced three months in pregnancy, when awakening one night she found herself completely saturated with blood. She sent for me at once, and on arrival I found her in the following state. The napkins and sheets were completely soaked in blood; pulse 120; lips blanched and cheeks pallid. The os uteri was very little dilated, and pains were coming on at long intervals. I applied a crystal of iron alum the size of a hazel nut to the os and the discharge stopped. Ergot and opium were administered every two hours. On the second day there was no pain and no reappearance of the discharge. The patient slept well and there was no internal hemorrhage; the os was not dilated, pulse 96; ergot was ordered every two hours. On the third day there was a good deal of bearing down pain, but no hemorrhage, and ergot was ordered every quarter of an hour. Two hours afterward the ovum was expelled complete, appearing like an old clot, there was no hemorrhage. The patient soon convalesced.

Case 3. This was a case of menorrhagia in a lady aged forty, the mother of six children, the youngest being four years old. Her last two periods were excessive, lasting seven or eight days, and a slight mucous

discharge for some days afterward. I was sent for on the sixth day, she then had a copious discharge of blood. On examining her with the speculum I found she had endocervicitis. I applied the iron alum with perfect success, and prescribed quinine and iron. During the next monthly period she had the same treatment on the fourth day. From that time she quite recovered, and six months later she was pregnant. She went to the full term, had a natural labor and gave birth to a daughter. The patient recovered rapidly.

From that time to this I have used the remedy in all cases of uterine hemorrhage where an immediate styptic was required, in accidental, unavoidable and post partum as well as secondary hemorrhage. I shall briefly quote two or three extreme cases to prove its value.

Case 4. I attended Mrs. J. in a previous labor, when she had a frightful post partum hemorrhage. I then had to inject liquor ferri perchloridi three times before the bleeding stopped. The second time I attended her and used every precaution during the labor; the hemorrhage, however appeared as soon as the placenta was expelled. I injected the perchloride of iron at once, but with no effect, and I then introduced a good sized crystal of iron alum, which stopped the flow at once. I should have remarked that this patient showed all the symptoms of embolism in her first labor, which placed her in extreme danger for about twenty-four hours.

Case 5. This was the case of Mrs. P., who lived four miles distant in the country. The child was born before the messenger started, he bringing the intelligence post haste that the woman was flooding to death. I found the patient quite moribund, pulseless at the wrist, cold and completely blanched. The placenta was expelled and the bed thoroughly saturated, there even was a pool of blood on the floor under the bed, it having percolated through everything. I applied iron alum at once, and injected sulphuric ether hypodermically into the arm, repeating this in ten minutes. A quarter of an hour afterward the pulse became perceptible in the large vessels. I gave her brandy and milk every half hour. She had no further hemorrhage, the binder was applied, and I left the woman with the caution that her head should not be raised from the pillow. Her convalescence was very slow, and it was a long time before she recovered her color.

Case 6. This was a case of secondary hemorrhage, occurring in Mrs. P., who lived ten miles away. I was sent for in her first childbirth. When I arrived the child was born and the placenta delivered. The patient seeemed to be going on well, no pain, no hemorrhage, pulse 78, and the binder was properly applied. On the sixth day I was sent for in haste as the woman was flooding frightfully. On my arrival I found the woman very weak from loss of blood. I applied iron alum and prescribed quinine and ergot. Three days afterward a small piece of pla-

centa was expelled, together with an old clot of blood. The woman gradually recovered.

I have a record of 82 cases of uterine hemorrhage where this remedy was applied, without a single failure: menorrhagia, 10 cases; metrorrhagia, 18; abortions, 15; accidental hemorrhage, 7; unavoidable hemorrhage, 4; post partum hemorrhage, 22; secondary hemorrhage, 6.

In post partum hemorrhage it is advisable always to clear the uterus of clots or any portion of placenta before applying the crystal, also, in an accidental hemorrhage, where there is detachment of the placenta, should the case appear to be one where there is no chance of carrying it to full term, the membranes ought to be punctured and iron alum applied in the usual way. There is no fear of any great hemorrhage coming on afterward, in a slight case, the iron alum will stop it, but should hemorrhage recur, it is advisable to have recourse to puncturing the membranes and induce labor.

By way of comparison I shall here enumerate most of the local remedies hitherto used in uterine hemorrhage, namely, the tampon, compression, friction, galvanism or electricity, ice, injections of hot or cold water, cold water applied to the vulva, cold douche on the abdomen, pressure on the abdominal aorta, and last but not least, the injection of liquor ferri perchloridi. Most of these require an apparatus for their application, which may not always be at hand, and, in addition. some time would be taken in their preparation and administration. Furthermore, there is always danger of injecting a styptic into the open mouths of the uterine vessels, and cold applications when the body is already too cold, must be injurious. Now iron alum does not require any apparatus or any preparation, as it is ready at hand, it will bring on immediate contraction of the uterus, which is the chief aim and object of these cases; as remarked before, it does not require to be introduced into the uterus, but only into the vagina, close to the os uteri, and left there.

The preparation is both cheap and effectual. I had some pessaries of it prepared by Messrs Ferris & Co., which I found expensive and no better than the crude crystal. I therefore discontinued them.

I find the crystals made with ammonia more permanent than those made with potash, and, therefore, to be preferred. Since I began using the crystals I never go to a case of labor without them; I have also used the fragments too small to be introduced, tied up in a piece of muslin, leaving the ends of the string hanging outside for more ready removal on the following day.

One of my former assistants, Mr. G. Tombs, of Llanwrtyd Wells, wrote to me:

"I have very great faith in iron alum since I learned its value from you. I have used it very extensively, and can testify to its efficiency in uterine hemorrhage. I have applied it in abortion, accidental and post

partum hemorrhage with the best results. In fact, in my experience I have not known it to fail. I never go to a midwifery case without taking it with me."

Another old assistant, Mr. J. W. Hinings, of Bromyard, says:

"I have used the iron alum in three cases of milder post partum hemorrhage, too severe to be left alone, and have been satisfied with its operation."

My son, F. L. C. Richardson, says:

"I use iron alum when there is the least tendency to uterine hemorrhage, in post partum cases, as a safeguard, and I have found it invaluable in four extreme cases, as they were in a moribund state. I never undertake a midwifery case without taking iron alum along with me as a reliable companion to ergot and tincture of opium."

My friend, Dr. Talford Jones, of Brecon, also writes to me about it as follows:

"Since you first recommended to me several years ago the local use of iron alum in uterine hemorrhage, I have used it in several instances of threatened abortion, accompanied by troublesome bleeding, and I have found the remedy extremely useful and valuable, very rapid and certain in its action. It is well to bear in mind that it is apt to give rise to considerable soreness of the vagina, and in one instance it even occasioned vaginitis."

The soreness after the application, referred to by Dr. Jones, I have never yet met with. It is probable that if a person wished to make an examination very soon after its application there would be great contraction of the parts, and in introducing the fingers some pain would be occasioned. It is better to wait until the following day to do so, having first sent up an injection of warm water to remove clots, etc.

I have also applied the remedy in four cases of uterine cancer where the hemorrage was very considerable and frequent. It controlled the bleeding entirely, and was reapplied on its recurrence. It also acted as a good antiseptic in these cases, and was the means of making the patients' lives more comfortable during the last six months of their sufferings. I have used it in several cases of leucorrhœa with great benefit. I wish my medical brethren to give it an unbiassed trial, and some who are engaged in this speciality in large towns would have ample means of doing so, as they would be likely to meet more cases in a twelvemonth than I would in ten years, owing to the difference in population.

Finally, I would supplement the treatment of hemorrhage by constitutional medicines, such as are generally recommended, namely, ergot, opium, digitalis, gallic acid, sulphuric acid, turpentine, acetate of lead, and transfusion and hypodermic injection of sulphuric ether in collapsed cases. Of these the most reliable remedies are the first two and the last two.

DISCUSSION.

Dr. Murphy (Sunderland), said Mr. Richardson was to be congratulated on the success of his cases, but if they were analyzed, as he had had time to record them, they were four. The first was a case of granular ulceration, where no doubt the local application of a styptic would be of service. The second was a case of abortion, where ergot was given every quarter of an hour, which stopped the hemorrhage, and where the external application of a styptic would have been useless. The third was a case of endocervicitis, where the application was possibly made direct to the bleeding surface. The fourth was a case of post partum hemorrhage, where the intrauterine injection of perchloride of iron was also tried. It, therefore, seemed to him very undesirable that it should go forth that iron alum, or, indeed, any styptic whatsoever, applied to the os uteri could be of the slightest service in the treatment of any form of uterine hemorrhage except those occurring from the os itself. The causes and sources of uterine hemorrhage are too numerous to be amenable to a single method of treatment.

Mr. Bernard (Londonderry) said that in post partum hemorrhage, if it was deemed necessary to remove coagula and inject perchloride of iron, both could be performed simultaneously through the medium of a Clover's spray apparatus.

INTERNATIONAL MEDICAL CONGRESS.

Eighth Session, held in Copenhagen, August, 1884.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

TREATMENT OF UTERINE MYOMATA BY LAPAROTOMY.

Prof. Koeberle of Strasburg said that the operative methods and indications in cases of fibromyoma were even at the present time the subject of controversy. The indications resulted from the gravity of the state of the patient in consequence of excessive or prolonged catamenial hemorrhage, or from the rapid increase in the size of the tumor, and from the age of the the patient, the seat of the tumor, and from special circumstances, as when life becomes insupportable from the troubles caused by the tumor. Operation was contra-indicated when there were extensive vascular adhesions or when the tumor was very large and had too extensive connections; when it was enclosed in the pelvis: when there was an ascitic effusion liable to occur and to be reproduced quickly; or when there was some concomitant incurable affection, or some circumstance which might exercise an unfavorable influence on recovery. The operative method varied according to the seat and size of the tumor. Uterine fibromyomata should be operated on by the vaginal method in cases where they formed a more or less prominent swelling in the uterine cavity and towards the vagina; when the size of the canal allowed extraction in this way. Fibromyomata, projecting

into the uterine cavity and immovable by the genital canal, as well as interstitial and subperitoneal tumors were removable by laparotomy. Prof. Koeberle spoke on hysterotomy and hysterectomy, and gave general rules for the operations. He stated that the results were very favorable when the tumors were developed in the body of the uterus, and the operation was difficult and grave when the tumors were developed in the broad ligaments, and deeply imbedded in the pelvic cavity. The reunion of the abdominal wound, dressing and antiseptic treatment were next passed in review. Dr. Koeberle concluded his paper by affirming that the treatment of uterine fibromyomata by laparotomy constituted a real progress in contemporary surgery, and merited serious consideration. The communication was discussed by Sir Spencer Wells of London, Dr. Margery and Dr. Apostoli.

Electric Treatment of Uterine Myomata.

Dr. Apostoli, of Paris, proposed a new electric treatment of uterine fibromata, distinguished by its point of application, nature, intensity, and its manual mode of application. To the old procedure of the application of continuous currents to the cure of fibrous tumors, characterized by very feeble currents, and by the vagina being oftenest the point of application of the positive pole— he opposed a treatment always more active, since it reached 100 mm. of intensity, and which was intra-uterine, acting upon the whole depth and extent of the uterine mucous membrane. A clinical experience extending over two years, upon over one hundred cases, had shown that the treatment constantly reduced the size of the uterus, and completely restored the patient.

Destruction of Uterine Tumors by Electrolytic Puncture.

Dr. Meniere of Paris advocated the destruction of uterine tumors by electrolytic puncture. This, he said, constituted an operation which was effectual and of little danger, provided it were practised, not by the vagina, but across the abdominal wall. It was indicated, 1, where medical treatment had failed; 2, where the fibromata were very large, and only slightly movable; 3, when they endangered the life of the patient by continuous metrorrhagia or grave general trouble; 4, that it was a last resource where total removal was impossible. In face of the marvellous results he had in six cases, it seemed to him useful to call the attention of the Congress to this point of gynecological therapeutics, and particularly to the manual method of procedure on which he had finally settled. The instruments used were: 1, a battery of the continuous current of Gaiffe, with 24 pairs of zinc plates, and galvanometer divided into millamperes; 2, gold needles, ten centimetres long by one millimetre thick, of lance shape and cutting edges at the extremities, and isolated for a length of seven centimetres by means of a resinous varnish dried and calcined in the flame of a spirit lamp; 3, a needle propeller with a graduated stop-notch, so as to insert the needles to a depth previously fixed upon; 4, light and flexible

conducting wires, joined to the needles by *serres fines*. The operation, he said, was repeated several times a week in case of inflammatory accidents, the sittings lasting twenty minutes, from the insertion of the positive and negative electrodes to the depth of eight centimetres. A current of from forty to fifty millamperes was used, and after the extraction of the needles the cutaneous orifice was closed with collodion.

Dr. Margary, of Turin, advocated supravaginal amputation of the uterus from the vagina as the treatment for fibromata in the posterior uterine wall.

Oophorectomy for Uterine Tumors.

Dr. Wiedow of Freiburg said that he had collected the cases in which removal of the ovaries had been performed for uterine tumors, both from published records and private information. Through the friendly co-operation of a large number of German, Austrian and Swiss practioners he was able to come to conclusions regarding the lasting effect of the operation, and the subsequent condition of the patients on whom it was performed. The principal point was to show the effect of the operation on the cessation of hemorrhage, and on the diminution of the size of the tumors. He also endeavored to point out whether, and in what way, the result of the operation was modified by the situation and size of the tumor. Professor Hegar and Sir Spencer Wells took part in the discussion.

Cæsarean Section.

Professor Mueller of Bern read a paper on this subject. He said that the prognosis had hitherto been very unfavorable, the death rate exceeding 70 percent. The recent advances in surgery, especially the improvements in laparotomy, have had much influence on the operation, which was shown by the endeavors to combat sepsis and loss of blood. These objects were sought by two different ways, the modifications were either radical or conservative. In the radical modification the source of hemorrhage and of septic infection was cut off by removing the uterus; in the conservative the uterus retained, and an effort made to ward off these dangers by careful treatment of the uterine wound. Both methods had certain advantages, but theoretical considerations could not support the radical modification. Yet in regard to this matter the result must turn the scale; the operation attended by the lowest mortality must be the best. The death rate of the radical operation was about 50 per cent, but trustworthy statics were wanting with regard to the conservative method, of which there had been as yet less experience than of the former. It therefore remains to be decided which operation is to be preferred. If the conservative method should gain recognition, another condition would have to be fulfilled, namely, to protect the woman against rupture of the uterus at a subsequent pregnancy, and against the danger of another Cæsarean section, and this would have to be done in a much more safe and satisfactory way than has hitherto been the case.

INTERMITTENT UTERINE CONTRACTIONS.

Dr. Braxton Hicks, of London presented a paper on this subject, illustrated by three cases. He again called attention to the value of these phenomena as a means of diagnosis, and briefly referred to the discussion on his paper in the last Congress, where it was stated that soft tumors of the uterus were contracted at intervals. Presuming this was ultimately found to be correct in general, the cases in which this would interfere with the diagnosis were pointed out: namely, those in which the fetus could not be felt, and where hemorrhage was urgent, for instance, where the uterus remained constantly firm as in some cases of blighted ovum. In these there was almost always a history of pregnancy and of recent hemorrhage; while if there were amenorrhea or only normal menses, it would be exceedingly rare if it were a soft tumor. He gave three cases, two of pregnancy complicated with uterine fibromata. In the third one, of extreme obliquity of the uterus, it was difficult to say how much was uterus. In all the cases the exact relation of the uterus was clearly and readily made out by means of the alteration which occurred at short intervals in the density of the uterus. [TO BE CONTINUED.]

Abstracts and Selections.

II.—GYNECIC.

On Early and Late Removal of Abdominal Tumors.—Sir Spencer Wells, Bart., late President of the Royal College of Surgeons of England, contributes the following to the *Medical Times and Gazette:*

Twenty or twenty-five years ago, when the removal of any abdominal tumor was very seldom attempted—when ovariotomy was on its trial—when uterine tumors were generally considered as beyond the art of the surgeon—early operation was the rare exception to the general rule only to act when the necessity for attempting to save life from great or immediate danger was so evident that failure could lead neither to surprise nor blame. The operation might not succeed in saving life; but it scarcely shortened it, and the patient only lost a few days or weeks of a suffering life. Then as ovariotomy rose to the position of lithotomy among surgical operations—when it became known that from a mortality of 70 to 80 per cent. the recoveries soon equaled the deaths, and then advanced rapidly with increasing knowledge year after year, until almost all the favorable cases recovered, and almost every death was in a case recognized, before operation, as more than doubtful, it became needful to utter a word of warning against indiscriminate or thoughtless proceedings. Afterwards, when the strictest hygienic precautions were supplemented by antiseptics, and improvements in operative detail were gener-

ally adopted, success became so great that ovariotomy not only took its stand as by very far the most successful of any capital operation in surgery, but the risk attending it in a favorable case could truly be calculated as little, if at all, greater than that necessarily attending any case of natural childbirth; and, as a necessary consequence, early operations could be advised with less hesitation.

Then, as ovariotomy led to the removal of uterine tumors, and the terms hysterotomy, hysterectomy, myomotomy and fibro-myomotomy crept into surgical literature, much the same change in professional opinion and practice has been going on. At first, it was only after an error in diagnosis, not discovered until the operation had been begun or completed, that a large solid uterine tumor was removed. Knowledge so acquired, and success thus occasionally obtained, led to more accurate diagnosis, and more frequent operations; and, just as in ovariotomy, to improvements in all the details of practice, and to a rate of mortality which has diminished rapidly, success having been attained under such unfavorable conditions as a few years ago would have justified any surgeon in refusing to comply with the earnest prayer for relief from an almost dying woman.

Again it became needful to sound a note of warning, and to suggest that the analogy between ovariotomy and hysterectomy must not be carried too far—that in many respects the two operations, especially as to the time when they should be performed, stand upon very different ground. A considerable proportion of ovarian tumors, sufficiently large to cause suffering or some inconvenience to a patient, or to lead her to seek for medical advice, sooner or later absolutely demand operative treatment. An equally large proportion of uterine tumors do not require any treatment, cause very little suffering or inconvenience, and disappear partially or entirely not very long after the cessation of menstruation. It is only in exceptional cases that hemorrhage, or unusual effects of pressure from tumors of moderate size, or excessive growth of the tumor, lead to a consultation as to the removal of a uterine tumor. In cases of ovarian tumor, removal is the rule of treatment. With uterine tumors it is the exception, not so rare as it used to be, but still the exception; and in cases where excessive periodical loss of blood is the reason for operation, the alternative proposal has to be taken into account of removing both ovaries and cutting off the supply of blood instead of removing the uterine tumor. No such alternative proceeding can be considered in a question of ovariotomy, unless drainage in cases where it is impossible to completely remove an ovarian cyst can be considered as analogous.

Many writers on this question of early or late operation seem to be remarkably forgetful of the fact that the surgeon cannot do exactly as he pleases with his patients. In many cases where he would have liked to operate early, he does not see the case until the tumor is very large and

the patient in extreme suffering. In others his advice must be modified by the circumstances of the patient. She may be a poor woman who must earn her living, or a rich one who can obtain every appliance that can afford relief; and although many persons are ready to act as they are advised and willingly submit to what is thought to be best in their own case, many others cannot or will not shake off their hopes and fears, their affections or their interests, and the surgeon, while giving information or advice, must leave the decision to her patient or her relatives. There are patients upon whom it is quite right to operate much earlier than the necessity of the case demands. A marriage has been arranged and cannot be indefinitely postponed; or a married woman wishes to accompany her husband to India, Australia, or elsewhere, or to join him there, and as an invalid can do neither; or a sensitive girl is distressed by remarks on her appearance. On the other hand, there are patients who determine, in spite of urgent advice, to defer operation as long as possible. A widow whose children are entirely dependent upon her annuity—a wife devoted to the care of a sick husband or child, must think of others more than of herself, and every surgeon of much experience has met with both classes of cases. He is not playing with chessmen. He is dealing with intelligent human beings, who are influenced by their emotions and passions, and are very seldom free agents; and he can do little more than say what, to the best of his knowledge and belief, will be the probable course and duration of a tumor if left alone, what is the amount of risk probably attendant upon its removal, and what security can be reasonably offered that recovery from the operation means a complete cure—in other words, that there will be no return of the disease.

Here again the contrast between uterine and ovarian tumors is remarkable. A woman who recovers, in any form of non-malignant disease, after ovariotomy is restored to complete health. If one ovary only is removed she may bear children of both sexes. The probability of disease occurring on the other side is not more than 1 in 100. If both ovaries are removed, this small drawback is removed; but young women become sterile.

All this has been completely established, but we are still imperfectly supplied with facts as to the subsequent conditions of women after removal of large portions of the uterus, with or without removal at the same time of one or both ovaries. I know of several where after some years the health has remained surprisingly good. The details of such cases may be found in my last work on ovarian and uterine tumors. I have seen other cases where it has been impossible to remove the whole disease. Subserous myomata have been removed, while mural growths have been left, and the patient may have been relieved, but not cured. In the present day such a case would probably be subjected to removal

of both ovaries as well as to myomotomy. But before any general rule of practice can be laid down, or any really accurate information or trustworthy advice can be given to a patient who has a uterine tumor, we must have as full and as precise histories of long series of cases as we have observed with regard to ovarian tumors and ovariotomy. We shall probably have, at the Copenhagen Congress, from Prof. Olshausen, of Halle, very important additions to our knowledge in this direction, and we have still to learn much as to the effect upon uterine growths and outgrowths of the removal of the ovaries. Vague unsupported assertions have little influence upon the opinion of a thoughtful or skeptical profession. And just now something more than a word of caution against rash, dangerous, unnecessary operations is called for. We are startled by reports of the removal of the normal ovaries of young women suffering from nervous disorders which may be exaggerated or imaginary; and it is to be feared that our professional honor is at stake; that statements are publicly made which, when challenged, cannot be substantiated; and that abdominal surgery in its latest developments is open to the denunciation hurled against the earlier ovariotomists; and that, with more reason than in 1850, Lawrence's question must be repeated, whether such operations "can be encouraged and continued without danger to the character of the profession," and West's assertion that "a fundamental principle of medical morality is outraged," cannot now be satisfactorily refuted.

The Female Urethra.—For several years the attention of anatomists and surgeons has been frequently directed to a pair of ducts, one on each side of the female urethra. They appear to be almost if not quite constant, and, morphologically speaking, they were hailed on their discovery as positive proof of the existence of the efferent duct of the Wolffian body in woman. Coblenz and others have frequently traced Gaertner's ducts in domestic animals, from the parovarium to the walls of the urethra. Klocks, Kleinwaechter, and especially Skene, of Brooklyn, all describe the ducts found in the urethra of the human female. They appear to be subject to a localized catarrhal affection, and to be frequently involved in urethritis. Boehm of Vienna, and severel French surgeons have described this affection, and recommend the introduction of a probe coated with nitrate of silver when the discharge becomes chronic, the ducts being laid open if that treatment fail. Recently Dr. Max Schuler of Berlin has published the results of a series of dissections, and his conclusions tend to subvert the theories of Skene and the morphologists, the ducts appearing to be the outlets of a distinct pair of glands. Dr. Schuller states that beween the longitudinal folds of mucus membrane that converge toward the meatus, numerous pores and depressions may be found. On each side of the middle line posteriorly rises a ring of mucous membrane surrounding an

orifice, into which a sound of from one to four millimetres in thickness, can be passed from half a centimetre to two and a half centimetres upwards. This is the duct, and the pair have been found by Dr. Schuller in subjects of every age from fetal life to the eightieth year almost constantly. Inflammation of the urethral ducts can be diagnosed when discharge from the meatus exists, without scalding pains during micturition. On horizontal section the duct appears as a slit, with a contour the more and more irregular from involutions and elevations of its lining membrane, the higher up the section is made, until it can be traced to its termination above as a gland made up of a collection of short tubules. The orifice of the duct is lined with a thick layer of squamous epithelium covering erectile tissue, the rest of the canal is covered with stratified transitional epithelium, covering vascular submucous tissue that contains plain muscular fibres. In old subjects the ducts are much contracted. Dr. Schuller has traced their origin in the fetus to the same period of embryonic life as that wherein the other structures composing the urethral mucous membrane are developed, and he can find no communication between them and the ducts of Gaertner.—*British Med. Journal.*

III.—DISEASES OF CHILDREN.

A Case of Fatal Umbilical Hemorrhage. — By D. E. Siebert, M. D., South Hill, Ala., in *Archives of Pediatrics.*

The patient was an infant only about thirty hours old. The accoucheur, an old and cautious practitioner, noticed nothing unusual about the case at birth except the uncommon size of the cord, which had a diameter of three-quarters of an inch or more, and appeared firm and healthy. He states also that there was unusual excitement in the cord, on account of which its ligation was delayed, but the pulse soon became normal, when the cord was firmly tied and severed, and the bandage applied. At what time the bleeding began could not be ascertained exactly, as the bandage was saturated with blood when it was discovered. I saw the child twenty hours after birth. The abdominal bandage, diaper and clothing were saturated. The little patient, a superb female child, was very pale from loss of blood. Pulse at wrist imperceptible. Carotid pulsation faint and wiry. Upon examination of the cord, which had been retied and the bleeding arrested by a neighbor lady, nothing abnormal was found. It was supposed that the ligature first applied had either cut through or slipped off the cord, as it was not found on removal of the bandage. The blood stains on the clothing were of a light, bright red, but in the creases about the genitals where it had collected in little pools, it was very dark and thin; not a coagulum nor the appearance of it was found. Assuring myself that the second ligature was secure, I had the bandage carefully reapplied under my own supervision, and left, directing that it be carefully watched and assistance sent for at once should hemorrhage re-occur.

After some time it did re-occur, and continued until the infant died, no assistance being available. The duration of the hemorrhage was probably about twenty hours.

That the hemorrhage was due to a condition of impaired or feeble coagulability of the blood is evident, from the absence of coagula upon the clothing and in the pools that had for some time been exposed to air.

The origin of the dyscrasia is not apparent in this case. There is no history of syphilis in the parents, no evidences whatever of the hemorrhagic diathesis in either, no evidence in the appearance of the patient of the presence of cachexia, on the contrary it was a very plump and healthy looking babe—no pemphigus, no petechiæ, no jaundice, no ecchymoses. The mother's health during gestation was bad.

It is with great regret I have to chronicle this fatal case, because I am satisfied that had intelligent assistance been at hand — which, unfortunately was out of reach — the application of a closely-fitting styptic compress, or a plaster of Paris cuirass, or failing these, the insertion through the umbilicus of two needles at right angles to each other, encircling each with the figure-of-8 ligature, would have effectually arrested bleeding and saved the little patient's life. Again, had I been particular to instruct the nurse how she might, in the event of re-occurrence of the hemorrhage, pinch up the umbilicus between her index finger and thumbs, and by firm and patient pressure stay the ebbing life until the arrival of assistance, I confess that my regret for the issue would have been less poignant. It is because these fatal cases are rare, and, for that reason, likely to take us unaware, and because I wish my professional brethren to bear in mind the possibility of their occurrence, their very unfavorable prognosis, and the most important measures for their relief, that I have asked the privilege of recording the above case.

The Duration of Lactation and Weaning.—Parrot (*Jahrb. f. Kinderh.*, B. xxi., H. 3) recommends nursing mothers to begin to feed their children with some kind of milk preparation at least as soon as the sixth month, and if possible by the fifth or fourth. Those cases are excepted in which children are provided with good wet-nurses, when suckling may be continued to the eighth or tenth month without any other nutriment. It must be borne in mind, however, that such cases may require weaning suddenly, and the immediate adoption of artificial feeding may be disastrous. As the child gets a little older (starting from the period at which artificial feeding was begun), two additional meals of milk-pap may be given daily, and one of *bouillon*. The author thinks that the period of nursing should be ended by the twelfth or fifteenth month, but this should never come in midsummer, rather at the end of spring or the beginning of fall. At the time of weaning, the child ought to be perfectly well, and should receive four meals daily, twice of milk-soup, or milk-

pap containing arrow-root, rice, or barley-flour, and twice of meat soup with tapioca, or other suitable ingredients. Between meals plenty of good cow's milk should be drunk. At a later period the author recommends, as readily digestible, a soup composed of meat juice, bits of white bread, and yolk of egg, with a suitable quantity of water. In addition to water, for drinking, the author thinks that a little Bordeaux wine or cognac is often appropriate. Easily assimilated mineral waters may also be given in small quantities.—*Archives of Pediatrics.*

Examination per rectum in Coxitis.—This method of examination is recommended by Carin (*Arch. f. Kinderh.*, B. v., H. 3 and 4) in inflammatory conditions of the hip-joint, as well as of the pelvic bones, as a means of especial value in the period of childhood. Either the dorsal or the knee-elbow position may be chosen, the most important structures in and about the pelvis being easily accessible to the examining finger. The author recommends, however, the dorsal position when the right hip-joint is diseased, and the knee-elbow position when the disease is in the left side. [It seems hardly necessary to direct, as the author does, that the examining finger should be well greased, and slowly introduced into the rectum.] The disengaged hand may be placed upon the abdomen, and may assist the examining finger in confirming its discoveries. Several cases of acetabular disease have been diagnosticated by the author by this means. His conclusion is that all cases of coxitis should be investigated per rectum, but especially those in which resection is to be performed.—*Archives of Pediatrics.*

Editor's Table.

Post Partum Hemorrhage.—Whenever Dr. J. F. Hibbard, of Richmond, Ind., writes an article, we are always sure he has something to say, and we enter upon its reading with pleasure and confidence. For example, take his article in the September number of the *American Practitioner*, upon post partum hemorrhage, from which we excerpt the report of a case, with his running comments. The methods used are perhaps not exactly original, but certainly not generally resorted to, and the views of the doctor apt to be overlooked. He says:

On the first day of July, 1883, I attended Mrs. ——, aged twenty-eight, in her second confinement. She was a lady of culture and refinement, and though reared and remaining in luxury, was not effeminate. Her labor was rapid and relatively easy, the second stage continuing about two hours, and terminating at midnight. My hand on the abdomen witnessed that the womb was fairly contracting immediately after the extrusion of the child, and then the ordinary time was consumed in

attention to the child, say fifteen minutes. Turning to the mother, I found she was bleeding freely, which was not arrested by subjecting the womb to massage through the abdominal walls, nor was the placenta passed down into the vagina. Promptly following up the cord, the uterus was found in a state of hourglass contraction, the constriction being about the middle; with the placenta in the upper division. With prudent haste I dilated the stricture with my fingers bunched pyramidally, to find the placenta not lying loose in the abdominal chamber, but more firmly adherent than I ever remember to have met with before, not peeling off from its attachment, as adherent placentas usually do, but requiring to be crushed off, as it were, with careful vigor by the ends of my fingers. This task performed, by external manipulation, I secured contraction of the womb as I withdrew my hand, and immediately gave her a full dose of fluid extract of ergot, a medium dose of morphia, and a moderate dose of alcohol, then sat down by the bedside with my left hand on the abdomen, over the uterus, which was slightly enlarged, and my right hand fingers on the pulse, and awaited events. They came rapidly. In removing the placenta the patient's head had been placed on the same horizontal plane with the body, and it was left thus. Her pulse was quick and feeble. She was anxious and distressed, complained of flashes of heat and a sense of suffocation; the pulse faded rapidly and was no longer discernable, the breathing ceased, and all was quiet as the grave — my patient had fainted — and still I moved not, nor allowed any one else to move. No water to her face, no camphor to her nose, no rubbing of the extremities of my patient lying there in the similitude of death, but I sat and watched and hoped. Presently there was a faint wave at the wrist, then a half developed sigh, and anon the fullness of respiration in my patient and a restored circulation were the evidence of her return to conscious life, and still I sat and watched. In a few minutes the breathing was again hurried, and another expressed apprehension of smothering, and again the pulse faded to indistinctness, and for the second time my patient had swooned from loss of blood, and yet another time no restoratives were applied, but the case left to the recuperative resources of Nature, and they were equal to my anticipations and desires. The phenomena of active life soon reappeared, and reached a satisfactory state, and then after a further watch of an hour I called the attention of the nurse to the state of affairs, and assured the confiding mother that all immediate danger was past. No subsequent evil was manifested, and the patient had speedy and complete recovery.

"Was this sound and safe practice?"

"Well, it was certainly safe, and that, I suppose, establishes its soundness, in this case, at least."

"But," continues my learned and experienced confrere, "suppose Mrs. —— had never recovered from that swoon?"

"That would have indeed been bad, but did you ever see such a case fatal in that wise?"

"No, but I have heard of instances where a person has fainted dead."

"Yes, certainly, and I have seen them, and that in spite of camphor, ammonia, and all the usual so-called restoratives, but not in post partum hemorrhages. I deem it a fair scientific conclusion that when syncope is due to sudden loss of blood or other acute impression in a system in a good physiological condition, there will be an automatic restoration, unless the shock itself is fatal, in which case the scene is closed, with, of course, no margin for help."

In my puerpera I looked for syncope, and desired it for remedial purposes. While satisfied that I had removed the last possible vestage of the placenta, I was apprehensive that the violence of the manipulation its removal necessitated had abraded some part of the surface of the womb and left an oozing of blood, or broken a vessel that the contraction of the uterus did not close, and it was my hope and belief that syncope would favor the formation of a clot that the re-establishment of the circulation would not remove. The second swoon was not anticipated, but did not carry with it any apprehension of incurring evil, as it was not regarded as an evidence of continued hemorrhage, because of the testimony of the hand, still in an inquiring position on the abdomen over the uterus.

The theory of the management of this case was this: In the administration of the ergot, the morphia, and the alcohol, it was believed that all the internal remedies had been given that could be of avail, and that quietude and rest were the best adjuncts to have them do their perfect work, and that an undisturbed condition of the uterus after contraction was of prime importance in stopping the flow of blood and maintaining a state forbidding its removal.

If in this case I had become alarmed at the enlargement of the womb after the exhibition of the drugs per orem and by massage, or the insertion of the hand had removed the clot from the uterus, and attempted to maintain a better contraction of the organ by manual efforts or the intra uterine use of ice or hot water, or a styptic, I am of the opinion I should have sacrificed my patient; and I am further convinced, that, if misapprehending the significance of the syncope, I had called aid and instituted active measures of restoration, I should have done an uncalled for, and unwise act, bringing my patient's interest into further jeopardy. S.

WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY—At a regular meeting of the above named society, held October 17th, 1884, the following officers were elected for the ensuing year:

President: Samuel C. Busey, M. D.

Vice-Presidents: W. W. Johnston, M.D., and J. Taber Johnson, M.D.

Recording Secretary: C. H. A. Klinescmidt, M. D.

Corresponding Secretary: Samuel S. Adams, M. D.

Treasurer: Geo. Byrd Harrison, M. D.

Committee on Business: C. E. Hagner, M.D.; Lachlan Tyler, M.D., and S. S. Adams, M. D.

Committee on Admissions: J. R. Bromwell, M. D.; H. H. Barker, M. D., and G. N. Archer.

Committee on Publications: T. C. Smith, M. D.; T. E. McArdle, M. D., and C. H. A. Klineschmidt, M. D.

CHRONIC VAGINITIS. — Dr. Martiman has found, at the Lucerne hospital, that salicylic acid mixed with powdered gum arabic and wheat flour, according to the following formula, gives good results:

R.	Salicylic acid,	3 parts.
	Wheat flour,	5 "
	Powdered gum arabic,	1 "

This powder is applied to the whole internal surface of the vagina by means of an insufflator.—*Ann. des Mal. Genito-urin.*

RUPTURE OF THE UTERUS FROM ERGOT.—Two cases of rupture from the injudicious use of ergot in labor were reported to the medico-chirurgical society of St. Louis.—*Practitioner.*

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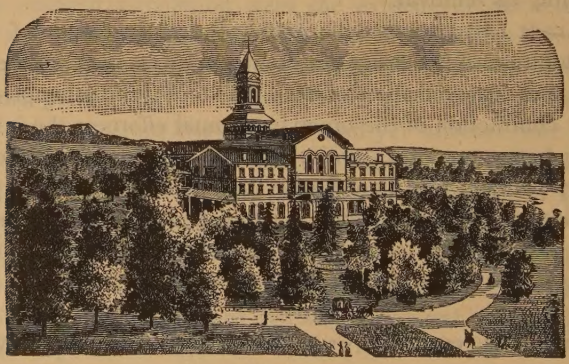

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